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AGRICULTURAL MARKETING SERVICE
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MARKETING SERVICE PROGRAMS

CONDUCTED BY

STATE DEPARTMENTS OF AGRICULTURE
UNDER THE
AGRICULTURAL MARKETING ACT OF 1946

IN COOPERATION WITH

AGRICULTURAL MARKETING SERVICE
U. S. DEPARTMENT OF AGRICULTURE
OCTOBER 1, 1960 - SEPTEMBER 30, 1961

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MARKETING SERVICE PROGRAMS

conducted by
STATE DEPARTMENTS OF AGRICULTURE
under the Agricultural Marketing Act of 1946

In cooperation with U. S. Department of Agriculture
(October 1, 1960--September 30, 1961) 1/

INTRODUCTION

Marketing service programs conducted by State departments of agriculture under the matching fund authority of the Agricultural Marketing Act of 1946 were started in 1947 with 21 States participating. Programs were carried on in 41 States in 1960-61. All of the programs are described in this report. The States are:

Alabama	Maine	Ohio
Alaska	Maryland	Oklahoma
Arkansas	Massachusetts	Oregon
California	Michigan	Pennsylvania
Colorado	Minnesota	South Carolina
Florida	Mississippi	South Dakota
Georgia	Missouri	Tennessee
Hawaii	Montana	Texas
Illinois	Nebraska	Vermont
Indiana	New Jersey	Virginia
Iowa	New Mexico	Washington
Kansas	New York	West Virginia
Kentucky	North Carolina	Wisconsin
Louisiana	North Dakota	

These programs are designed to help marketing agencies at the various levels of distribution adopt new techniques and methods for performing marketing operations discovered or developed through research; show these marketing agencies and producers how to improve or maintain the quality of farm products during marketing; provide producers and marketing agencies with new, or more timely and complete marketing facts and information; and expand markets for farm products.

The Office of the Matching Fund Program, Agricultural Marketing Service, provides guidance and assistance to the States in conducting these programs. It also assisted in planning and conducting the annual National Marketing Service Workshop, held at Atlanta, Georgia, November 14, 15, 16, and 17, 1961. The 292 representatives from 37 States, Puerto Rico, and the District of Columbia attending this workshop discussed finding more efficient ways of marketing agricultural products and bringing about the adoption of better marketing practices.

1/ Material in this report compiled and edited by Mildred Pasternak. Matching Fund Program, Agricultural Marketing Service, U. S. Department of Agriculture.

General guidance to the matching fund program is provided by the Advisory Committee on Cooperative Work under the Agricultural Marketing Act with State Departments of Agriculture. Members of that committee are: L. Y. Ballentine, North Carolina, chairman; George H. Chick, Maine; Spencer Duncan, New York; Roy Freeland, Kansas; and Donald E. Wilkinson, Wisconsin.

To improve the operation of their programs and prevent duplication of effort, the State departments of agriculture maintain close cooperation with industry and trade groups, State extension services, and agricultural experiment stations, vocational educational agencies, and the U. S. Department of Agriculture.

These programs are conducted under cooperative agreements between the State department of agriculture, or a similar agency responsible for marketing service work, and the U. S. Department of Agriculture. Individual projects are initiated by the States and approved by the Agricultural Marketing Service. Allotments were made to the States to conduct 118 projects during the period covered by this report. Projects were divided among the following four major fields of work authorized under the Act:

1. Maintaining product quality

State departments of agriculture give firsthand assistance to producers and marketing agencies in determining the causes of quality losses occurring at the various stages of the marketing channel and in taking corrective actions. This work often involves detailed plant and retail store surveys to spot the places and operations where bruising, contamination, and other causes of quality losses are occurring; consulting with plant or store management on the problems found; and providing firsthand assistance in adopting recommended corrective measures. Demonstrations of official grades and standards and the advantages of improved containers in maintaining quality are given to producers and marketing agencies.

2. Expanding market outlets

Work in this field is aimed at increasing the consumption of our abundant agricultural production. In helping to accomplish this objective, the States provide more timely and reliable production and marketing information and develop an improved communication system with potential buyers. Frequently, basic changes in grading, packaging, processing, and distribution methods are necessary to achieve increased consumption on a sustained basis.

3. Reducing costs through improving efficiency of marketing facilities and operations

Under the projects in this field, State departments of agriculture help producers and marketing agencies design new or re-modeled facilities; select equipment; plan layouts; and adopt

work methods which speed output, reduce labor requirements per unit, and reduce costs. Assistance also is provided in determining the most effective locations and efficient sizes of new facilities such as livestock auctions, poultry processing plants, grain elevators, milk plants, fruit and vegetable assembly markets, and food distribution centers.

4. Providing new basic data and market information

New information and basic data on both a State and local area basis, relating to trends in production, changes in consumer demand, the competitive situation in markets, storage holdings, and rate of disappearance, are collected, analyzed, and disseminated by Federal-State statisticians in the various programs. These data are of value to producers and marketing agencies in planning programs. Information to provide a more dependable basis for crop estimates and projection of production trends is obtained through censuses of tree numbers and objective samplings of crops at various stages of growth.

With the trend toward decentralized packing and processing, the bypassing of terminal markets, and direct selling at country points, the need has increased for market news information at the local market level. To meet this growing need, experimental market news coverage is being provided for local markets not heretofore reported. If successful, the States may incorporate these programs as a part of their regular market news service and support them entirely with State funds. If not, they are discontinued.

This progress report, prepared from material submitted by the States, presents (1) the types of marketing service programs by major commodities, and States; (2) summaries of work by States and projects; and (3) a list of recent publications issued in connection with the projects.

TYPES OF MARKETING SERVICE WORK BY MAJOR COMMODITIES AND BY STATES

Fruits and vegetables

Improving quality.--Alabama, Alaska, California, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Expanding outlets.--Alabama, Alaska, California, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Improving marketing efficiency.--Alabama, Alaska, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Mississippi, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oregon, Pennsylvania, South Carolina, Virginia, West Virginia, and Wisconsin.

Providing basic data and marketing information.--California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, South Carolina, South Dakota, Virginia, Washington, West Virginia, and Wisconsin.

Dairy products

Improving quality.--Alaska, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Minnesota, Mississippi, Montana, North Dakota, Oklahoma, Vermont, Washington, and Wisconsin.

Expanding outlets.--Alaska, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Mississippi, Montana, New Jersey, New York, North Carolina, Oklahoma, Vermont, Virginia, and Washington.

Improving marketing efficiency.--Illinois, Louisiana, Mississippi, New Jersey, Virginia, and Wisconsin.

Providing basic data and marketing information.--Florida, Indiana, Iowa, Louisiana, Minnesota, Mississippi, New Jersey, New York, Pennsylvania, South Dakota, Virginia, West Virginia, and Wisconsin.

Poultry and eggs

Improving quality.--Alabama, Alaska, Arkansas, Colorado, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, Washington, and West Virginia.

Expanding outlets.--Alabama, Alaska, Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Minnesota, Mississippi, Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, Washington, and West Virginia.

Improving marketing efficiency.--Arkansas, Florida, Georgia, Illinois, Kansas, Louisiana, Maryland, Minnesota, New Jersey, New York, North Carolina, Oklahoma, Tennessee, Virginia, and West Virginia.

Providing basic data and marketing information.--Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, Oklahoma, South Dakota, Virginia, Washington, West Virginia, and Wisconsin.

Livestock

Improving quality.--Alaska, Colorado, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, North Carolina, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

Expanding outlets.--Alaska, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, North Carolina, Oklahoma, Pennsylvania, Tennessee, Virginia, Washington, West Virginia, and Wisconsin.

Improving marketing efficiency.--Indiana, Kentucky, Louisiana, Maryland, North Carolina, Tennessee, Virginia, and Wisconsin.

Providing basic data and marketing information.--Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New York, Ohio, South Dakota, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Other commodities

State departments of agriculture also helped producers and marketing agencies in improving the marketing of several other commodities, such as grain, seed, hay, cotton, coffee, wool, tobacco, honey, maple syrup, and nursery and forestry products.

The following summary describes the activities and accomplishments of each of the States participating in the program during the reporting year, October 1, 1960 to September 30, 1961.

SUMMARIES OF MARKETING SERVICE WORK BY STATES AND BY PROJECTS

ALABAMA

Improving quality and expanding market outlets for poultry and eggs (ALA-A-2)

Egg producers, wholesalers, and retailers were assisted by the Alabama Department of Agriculture and Industries in maintaining quality, reducing marketing costs, and expanding market outlets for eggs.

During visits to egg producers, personnel of the department made suggestions for improving cleaning, handling, and packing practices. Many Alabama eggs are graded and cartoned on the farm. Because of this, quality factors, grades, and sizes or weight classes of eggs, and proper procedures for grading and sizing were discussed and demonstrated to the egg producers.

Suggestions on improving layout and operating efficiency of grading plants were made, such as better arrangements of equipment, proper methods of stacking eggs in coolers, and improved methods of loading in trucks. Likewise, the importance of frequent marketing of eggs was emphasized and instructions provided on the importance of using good packing material and methods to prevent breakage. Significantly, eggs cartoned on Alabama farms are now sold through retail outlets in Northeastern markets.

In addition to the work with producers, department personnel contacted wholesale egg packers and distributors and assisted them in adopting good marketing practices. Emphasis was placed on the proper stacking of cased eggs in coolers. Wholesale egg dealers who have adopted the practices have found that shipping eggs in good cases, using good packing material, pre-cooling egg cases, and properly sealing them before stacking correctly in trucks for long hauls pay dividends.

During store visits, retailers were encouraged to check dates on egg cartons when eggs were delivered to make sure freshly graded eggs were received, to store eggs at optimum temperature and humidity, to erect larger and more prominent displays of eggs, and to rotate stocks.

In addition to the assistance provided producers, wholesalers, and retailers, the department cooperated very closely with the Alabama Egg Association, Alabama Poultry Industry Association, and the Poultry and Egg National Board in "March Egg Month" and "Egg-tober" promotion campaigns. Department personnel prepared informational materials for use by food editors and others, and assisted with various aspects of the promotion programs.

Several years ago, before this quality improvement program was started, local eggs were of such low quality that egg dealers were reluctant to handle them. Reports of Egg Law enforcement inspectors of the Alabama Department of Agriculture and Industries indicated that approximately 40 percent fewer Alabama eggs were suspended from sale in the State retail markets this past year compared with 1959-60.

Quality improvement of fruits and vegetables on the Birmingham market
(ALA-A-3)

Continuing improvement is being made under this project in the quality of produce offered for sale on and through the Birmingham Farmers Market. More than 90 percent of the loads arriving on the market were examined for quality and growers advised on how they could improve their pack to obtain better financial returns. On the recommendations of department marketing specialists, the market has established minimum quality requirements for produce to be offered on the market. All produce of inferior quality has been eliminated from the market.

Considerable work was done with the various container companies to improve existing packages and to develop additional containers.

The market manager worked very closely with department personnel assigned to the market project in keeping the market clean and sanitary at all times. Marketing agents assisted in getting a machine-grading operation started on tomatoes, and plans are to expand this type of operation to other commodities.

Graders' guides on the grading and preparation of fruits and vegetables for market were printed and distributed to growers. They are increasingly making use of these guides in preparing products for sale through the market.

Because of improved product quality and the use of standardized containers the number of out-of-town buyers on the market has increased about one third. Outlets for the produce of family-size farms are being broadened extensively. As a result of the work under this project, growers marketing through the Birmingham market in the 1961 season received additional returns of about \$100,000 over the preceding season.

Cooperating with the department in this project were the Jefferson County Truck Growers Association, general farm organizations, Extension Service, Birmingham Public Health Department, and container companies.

Quality improvement and expansion of outlets for fruits and vegetables on the Dothan market (ALA-A-4)

This project, initiated during the past fiscal year, has the same objectives as the work going forward at Birmingham under ALA-A-3, i.e., work with growers, wholesalers, truckers, and others to establish orderly marketing, improve and maintain quality, and expand outlets for fruits and vegetables.

ALASKA

Improving quality and expanding markets for Alaskan products (ALAS-A-1)

During the year, department personnel worked with producers, handlers, and retailers of all Alaskan commodities in evaluating problems of quality maintenance and in improving marketing of all commodities. Partly as a result of this work, and special promotional efforts publicizing products of the State, sales of all farm commodities increased 15 percent over 1959.

In a special effort to gather data on the feasibility of developing a potato and vegetable processing industry, with particular emphasis on quick freezing, many publications were reviewed and discussions held with potential processors and handlers. It was concluded that pilot tests should be conducted to determine feasibility of such processing before further work is undertaken.

Due to military procurement changes, which required moderately skinned or better maturity potatoes, department personnel worked with individual growers explaining the requirement and advising them on means of improving maturity of thin skinned varieties in which immaturity is common. By working with various lots, it was found that pallet handling, and a week's drying period followed by a minimum of handling during washing and grading would encourage skin setting sufficient to meet the grade. The result was a potato of better quality, and growers were able to furnish approximately \$10,000 worth of potatoes that would not have met standards under ordinary handling.

Work was continued with celery and lettuce growers in revising storage methods in an effort to extend the marketing season for those commodities.

Alaska milk production increased 18 percent over 1960; and activities were continued to assist the industry by furnishing production statistics and outlook information. Assistance in the development of plans for the construction of a small plant to serve a fast growing area previously served by distant producing areas--with the milk subject to problems of long haul and poor transportation, with attendant quality problems and high prices--was also given.

Prospects for increasing reindeer meat marketing, both in Alaska and in other areas, developed during the year. The department was instrumental in getting the State Chamber of Commerce, a commercial airline, and a food products firm interested in the product. Indications were that the food products firm may handle a major portion of the reindeer production. The department was also responsible for instigating a pilot mink project on Nunivak Island to utilize reindeer waste meat and bone.

Instructions in proper egg grading were provided producers and handlers to help in the elimination not only of poor quality local eggs offered by retailers, but also of those from all sources. Retailers were assisted with in-store promotions, and encouraged to rotate egg stocks and to order more frequently to maintain quality.

During the harvest season, grain samples were tested to determine quality and dockage. Numerous grain harvesting and drying operations were visited and suggestions made for ways to reduce dockage and operating costs. Three small feed makers were advised on sources and quality of grain to encourage local use.

ARKANSAS

Improving quality and expanding outlets for agricultural products, poultry, and eggs (ARK-A-1)

Eggs.--Service activities in the area of egg marketing covered phases of quality maintenance: proper cleaning, packaging, grading, transportation, and storage. At the retail level activities pertained to stock rotation, proper display, and information as to supply and demand. Producers and packers were also assisted in establishing outlets in foreign countries.

Project personnel, assisted by representatives of the Transportation and Facilities Research Division, Agricultural Marketing Service, U. S. Department of Agriculture, worked with the egg industry on facility equipment and operating practices. During the past year, assistance was provided in planning egg packing plants now considered to be the most modern in the Southeast.

Help was given to producers in various areas of the State in forming organizations to centralize packing and selling. These organizations have

been able to effect substantial reductions in marketing costs and to insure selling efficiency. For example, producers in one area realized a 10 percent increase in net returns over their independent operations.

In cooperation with the Arkansas Egg Council and other industry groups, matching fund personnel worked with P.E.N.B. in its promotional activities. Newspapers, radio, television, and other news media were employed to publicize the egg industry in Arkansas.

Poultry.--A new publication, "The Arkansas Poultry News," containing information on current activities of the industry and new developments in marketing was published and distributed.

Producers and processors were assisted in reducing condemnations and downgrading through recommendations of improved management practices and changes in equipment and processing techniques.

Project personnel, in cooperation with industry groups, planned and staged a poultry and poultry products exhibit at the annual State Exposition in Little Rock.

CALIFORNIA

Improving quality and packaging of agricultural products (grapes, apples, peaches and plums) (CALIF-A-1)

Activities under this project were concerned with an evaluation of maturity and quality standards for grapes and apples and packaging requirements for peaches and nectarines.

Further soluble solids-acid ratio tests were made on Cardinal, Ribier, and Perlette varieties of grapes. The data from these tests are to be combined with those obtained in the 1959 and 1960 seasons, then analyzed and reported to grape growers and shippers at their meetings before next season. The California Grape and Tree Fruit League plans to use the results as a basis for recommendations for legislative changes to provide a more satisfactory standard of maturity for grapes.

Additional data were collected on soluble solids content of apples to determine the need for revision of minimum maturity standards as a basis for establishing picking dates each season. These data will be used in determining minimum maturity standards for some 24 varieties of apples.

Development of methodology for certification of virus-free fruit, nut tree, and vine nursery stocks (CALIF-A-2)

Under this project, work was continued on the assembly of information on viruses and virus hosts to develop techniques of detecting viruses in nursery stocks, propagating source trees and for identifying for registration and certification those stocks which are virus free. Project personnel cooperated with other agencies in developing and formalizing regulations for

those registration and certification programs which were sufficiently advanced to be placed on an operating basis and supported by industry on a fee basis rather than matching funds.

Thus far, formalized registration and certification programs are in operation for cherry and grapevine nursery stock. Experience gained from these programs has been valuable in planning programs for other nursery stocks. Attention was being given to determining the feasibility of expanding the cherry program regulations so that other deciduous tree fruit and nut nursery stock could be registered and certified under them when the necessary methodology was developed.

Cherries.--The cherry program, now operating on a formalized and industry-supported fee basis, is administered by the Nursery Services in the California Department of Agriculture. Personnel of the matching fund project, on a standby basis, provide technical assistance when needed for solving methodology problems as they occur. During the 1960-61 marketing season, 98,659 certified cherry trees were grown for market by nurserymen participating in the program. In the same period, 98,097 cherry buds, 67 pounds of Mahaleb rootstock seed, and 21,074 Mahaleb rootstock seedlings were approved and marketed, all of which were eligible for use in propagating certified seed.

This certification program has enabled the nurserymen to identify their stocks as superior in quality and to receive a premium price of as much as 25 cents per tree above the price for noncertified stock.

Grapes.--As with the cherry program, the grapevine registration and certification program is on a formalized industry-supported fee basis, with matching fund personnel available on a standby basis to give technical assistance when needed.

Twenty-two grape propagators are now participating in the program. During the 1960-61 season, 163,270 certified rooted grapevines and approximately one million grape cuttings eligible for the propagation of certified grapevines were marketed.

Peaches and nectarines.--The eight host index tests of 35 select peach and nectarine trees representing 21 leading varieties, started in 1959, are being concluded. The results of these tests show that 30 trees, including 16 varieties, tested free of viruses, and 5 trees, one each of 5 varieties, were found virus infected. Progeny of the 30 select trees which have successfully passed the tests of freedom from viruses are being propagated by the University of California for use in a registration and certification program. Under present plans, regulations for the registration and certification of peach and nectarine trees are to be coordinated with and be a part of the proposed broader regulations for the registration and certification of deciduous fruit and nut trees.

Pending the availability of registered propagating sources of peach and nectarine stock, the service to nurserymen of making preliminary examinations

of their propagating sources was continued toward helping them locate the cleanest, currently available sources.

Almonds, apricots, plums, and prunes.--Services to nurserymen during the year on almonds, apricots, plums, and prunes included the making of preliminary examinations of their rootstock and scion propagating source trees. Preliminary or screening index tests continue to indicate that as many as 50 percent of the trees proposed for propagating sources may be infected with latent viruses. This points out a definite need to continue the program of critical indexing to improve the quality of propagating sources for these nursery stocks and the necessity of establishing a system of certification for identifying virus-free nursery trees.

Apples, pears, and quinces.--Work with apples, pears, and quinces has been directed toward assembling information on the virus diseases in these fruits and in developing methods of detecting and avoiding them. Methods of diagnosing viruses in pome fruit nursery stocks and orchard trees are prerequisites to the establishment of a registration and certification program. The problem is made difficult because the apparent diagnostic symptoms of some viruses are readily confused with nonvirus diseases which may cause similar unthrifty growth and poor fruit production.

The loss of an estimated one million pear trees in California since 1958, by pear decline, a disease believed but not yet proved to be caused by a virus, has made pear nurserymen and orchardists conscious of the need for virus-free nursery stocks.

In an attempt to supplement visual inspections of apple propagating sources, screening index tests on five host indicator variety test plants were started. Although the tests are incomplete, the work to date on a limited number of apple trees, including 13 commercial varieties, has shown 75 percent of the trees to be infected with one or more latent viruses which were not detectable by visual inspection.

Expanding markets and improving marketing practices for agricultural products (CALIF-B-1)

The marketing problems studied under this project have to do with stabilizing and expanding the market for agricultural products through better preparation of the product for the market, helping solve problems of distribution and utilization, and increasing the effectiveness of promotional programs.

The work carried on during the reporting period was a continuation of the study of problems confronting the turkey industry. The study is concerned mainly with how to increase the year-round consumption of turkey.

Information concerning the problems of the industry has been collected and analyzed. Preliminary findings and recommendations have been furnished to members of the California Turkey Promotion Advisory Board and to State officials concerned with the industry. A comprehensive report is being prepared for publication and distribution to the members of the turkey industry and others.

This study helped State officials responsible for administering the turkey marketing order to better understand the problems of the industry. It also helped the Board to take constructive action and the promotional agencies serving the industry to carry on effective programs. When the report is released to the industry, there is good reason to expect that if the turkey producers adopt the recommendations of the study, they will substantially improve their market and their income. Some of the findings and recommendations are: Developing legislative approaches to the problem of over-production; increasing the bargaining power of producers; making turkeys more salable; improving the labeling of turkeys; better meeting the needs of commercial users, including restaurants; assisting retailers to improve marketing; and promoting turkey to make it more popular with the consuming public.

New basic information for grapes, tree fruits, tree nuts, and bushberries
(CALIF-D-1)

About one-fourth of the orchards and vineyards in the State were surveyed to obtain information on tree numbers by age and variety. The results of the survey were published in an annual bulletin and distributed to interested individuals and agencies who have a need for indications of future fruit production.

Grape objective yield survey (CALIF-D-4)

This project is designed to develop, through experiments in sampling and statistical techniques, an objective method of forecasting production of the principal types of grapes produced in California.

The chief activity during the reporting period was the survey of 900 sample vineyards in which random vines were marked, and one-fifth of the bunches counted measured on the vine and 10 percent harvested for weighing. Two bunches from the sub-sample were selected for heavy counts. In addition, a sub-sample of 450 of the vineyards was visited during harvest and the same measurements taken in the previous survey were obtained, and a sub-sample of bunches selected for making test of sugar/acid content. Samples were taken from 60 vineyards weekly for measurement of size increments.

Data from the forecast survey were used in making official forecasts of grape production.

This work has progressed to the point where it has passed from an experimental to an operational stage and the project terminated as a matching fund activity. Certain improvements in techniques will be sought in the future but these can be developed during the program of regular operations. It was possible to transfer the grape survey work from an experimental to an operating program in a relatively short time because of the experience obtained in earlier work financed with matching funds with cling peaches and bartlett pears.

Walnut objective yield survey (CALIF-D-5)

Sampling and objective counts and measurements to develop a method of forecasting walnut production to within 5 percent of actual quantity produced were continued. The major survey under this project involved observations on two randomly selected walnut trees in each of 500 sample orchards chosen in the principal producing counties.

The nuts on a random sample of branches were counted and every fifth nut picked for sizing, weighing, and grading. A preharvest count and size survey was made in late September in a sub-sample of 125 orchards to establish changes in nut population and average sizes that may occur between the time of the forecast survey and harvest.

During June and July, a size increment survey was made on a small sample of five orchards to determine the date when walnut shells will have reached maximum size and will have begun to harden.

The walnut survey work and the objective forecasts using the data obtained in the surveys are still in the experimental stage but data from the experimental forecasts were the basis for the official September 1, 1961 walnut forecast.

Lemon objective yield survey (CALIF-D-6)

Surveys were continued during the year to develop methods for forecasting the production of lemons in specified future periods and to develop procedures which will provide a mathematical model for more accurately estimating total production for any crop year.

The initial survey was conducted in the full sample of 500 lemon groves. Fruit counts on limbs selected at random in two randomly selected trees were made. A sub-sample of the fruit was picked, graded, and sized. Subsequent surveys were made (both full-scale and sub-sample) to provide an intermediate adjustment of production projections, and to determine changes in set and size of old fruit, development of new fruit, and to secure information concerning the fruiting habits of lemons.

The forecasts from these various surveys were made available to the lemon industry in informal reports. The statistical survey and techniques involved in this project have been refined to where it is anticipated that this project will be transferred from an experimental to an operating basis in the near future.

Almond objective yield survey (CALIF-D-7)

This project was initiated late in the reporting year and no significant progress had been made.

COLORADO

Improve product quality and marketing practices for farm products (COLO-A-1)

Activities under this marketing service project are being devoted to specific marketing problems dealing with the following:

Potatoes.--Buyers for Colorado retailers, restaurants, and other users of potatoes in the State are dependent on out-of-State sources of supply for approximately two months prior to harvesting of the new crop in northeast Colorado, the first Colorado district to come into the market. Quality and prices of potatoes from these out-of-State sources have been such that Colorado growers and shippers have had extreme difficulty in regaining a reasonable share of the local market with the result that many handlers had to ship a large portion of the crop to deficit markets outside the State which meant higher freight costs and lower returns.

To meet this problem, a quality improvement program with growers and shippers was initiated several years ago with the support of matching funds. Having achieved significant progress in improving quality, the emphasis under this project has been shifted to promotional and merchandising efforts. With the cooperation of growers, handlers, and retailers, the marketing division developed a fall promotional program for "Colorado Potato Week." Home demonstration club women acted as in-store representatives in 137 retail outlets in the metropolitan areas in eastern Colorado to "sell" potatoes and distribute recipes. Paper aprons and caps, imprinted with "Buy Colorado Potatoes Now," and "Colorado Potato Week" were used in the retail stores, together with other point-of-sale material and displays furnished by a brand name food company. The event also had the cooperation of the Colorado-Wyoming Restaurant Association. The Governor issued a proclamation highlighting the event, and the publicity surrounding the event was supplied to newspapers throughout the State.

The results of the program were very gratifying at all levels. Cooperation by retailers was excellent and Colorado potatoes were on the market much earlier than in the past. Since the promotion, the demand has continued. As a result, more Colorado potatoes are being consumed locally and growers are assured a higher return for their product.

Peaches.--Prior to the 1961 harvesting season, specialists from the department worked closely with the Mesa County Peach Board of Control to establish liaison between growers and shippers and retail outlets in an effort to get a higher quality product to local markets. To further this effort, a field trip to Mesa County was arranged for produce managers of all grocery chains to view the situation firsthand and to discuss quality problems with producers. The result was a closer understanding of each other's problems, and store managers reported that Colorado peaches arrived at Denver markets in better condition from the standpoint of maturity, size, and overall quality.

During the peach harvest, a marketing specialist served as coordinator in providing information to the industry on marketing conditions and thereby

helped in contributing toward a more orderly marketing situation.

Turkeys.--Division personnel again worked with the Colorado Turkey Federation in planning and conducting five turkey promotions--Easter, Mid-summer Turkey Time, Colorado Turkey Week, Thanksgiving, and Christmas. The promotional activities, which were financed by industry, included streamers distributed to merchandisers throughout the State, display ads carried in major newspapers, letters sent to radio and television program directors and food editors, a retail display contest, and a full-page ad in the Colorado Grocer.

Excellent cooperation was given by the retailers and with such continued support and cooperation, the local market for Colorado turkeys is constantly growing.

Wheat.--The Colorado Department of Agriculture, through the Colorado Wheat Administrative Committee, continued to cooperate in the program of the Great Plains Wheat, Incorporated, in developing foreign markets for surplus wheat.

Cooperative marketing.--The Colorado Department of Agriculture is taking an increasingly active role concerning farmer marketing cooperatives. The work with cooperatives falls into four general categories: (1) Assisting in formation of cooperative associations, (2) advising new boards of directors, (3) working with established organizations, and (4) cooperating with Extension Service in helping cooperatives improve management practices.

During the past year, the department worked closely with the Colorado Cooperative Council in helping to form 7 new cooperatives in the following fields: (1) Swine marketing, (2) onion marketing, (3) cantaloup marketing, (4) apple marketing and storage, (5) farm elevator and feed mill, (6) farm supply, and (7) farm management. In addition, 6 established organizations were assisted in updating their bylaws, financial structure, and marketing program to meet changing marketing conditions.

An outstanding example of the new organizations assisted by the department is the onion marketing cooperative that completed its first year of operation in July 1961. In addition to receiving top market prices for their onions, the 19 members of the association realized additional savings and margins of \$10,200, and were able to liquidate more than \$23,000 of indebtedness for their facilities.

Another example is the Swine Growers Association. This cooperative organization is pioneering a new system of marketing livestock which is being watched closely by other segments of the livestock industry. The purposes of this association are (1) to obtain a higher price for hogs raised in western Colorado through a more orderly system of marketing; (2) to improve the quality of swine produced through selective breeding; and (3) to effect savings in cost of production through cooperative buying of feeds and supplies in larger quantities. Tangible results already are apparent. For the first time in history, members of the association are receiving Denver top prices

for their No. 1 hogs whereas before they had been receiving \$1.50 per hundredweight below the Denver market; quality improvement is underway and many members have used the electronic back fat tester to select breeding stock for the coming year; and savings of 15 percent in cost of feed supplement and 30 percent in cost of veterinary supplies and medicines are being received by the members.

FLORIDA

Maintain and improve quality and expand markets for agricultural products (FLA-A-1)

Numerous activities were carried on by the Florida Department of Agriculture to promote the sale and consumption of poultry and eggs. At the retail level, management and store personnel were instructed in the recommended procedures for the proper handling and merchandising of poultry and eggs. Trained demonstrators informed consumers on egg quality and size, identification and use of various grades, and nutritional values of eggs. Point-of-sale material was displayed and nutritional guides and recipe books paid for by industry were distributed.

A program of seal of quality identification was continued to encourage the production and marketing of uniformly high quality eggs and to expand consumption. Premium prices of two or more cents per dozen were generally realized for eggs sold under this program. Other activities included working with the restaurant trade to stimulate demand for eggs; utilizing public service time on radio and television to reach a larger percentage of the consuming public; preparing and distributing to newspapers and magazine food editors news articles, recipes, and general interest information on poultry and eggs; conducting classroom instruction on the importance of a proper diet for grade school children and presenting information about the poultry industry that would be of interest to the children and distributing printed nutritional information, recipes, and other items of household interest to take home; and planning and conducting cooperative promotional programs to extend the mutual promotional benefits available by combining the efforts of two or more organizations and prepare, test, and publicize food items which include other products such as milk, citrus juice, honey, and meat products.

Developing uniform procedures for determining pounds solids of oranges for processing (FLA-A-2)

This is a new project and was just getting underway during the end of the reporting period. A unit of measurement "pounds solids" has been used in the Florida orange processing industry for price determination and quality control purposes. However, since the sampling and inspection extraction equipment available at different plants varies in design and operating characteristics, it has not been possible to make uniform standardized pounds solids determinations. This project was initiated to appraise existing equipment and procedures and develop improved or new equipment and methods which will minimize sampling errors and give greater accuracy and uniformity of measurement.

Developing procedures for making both annual and quinquennial forecasts of citrus production (FLA-D-2)

Objective fruit counts and measurement data were collected during August and September and together with expanded limb count data were analyzed for the October production forecasts. The October forecast of production was within 4 percent for oranges and 6 percent for grapefruit, despite a severe hurricane which came after 85 percent of the sample groves were already counted, necessitating recount and rechecks to determine loss of fruit from the hurricane.

Each month during the harvest season, the fruit was recounted on a subsample of limbs to determine droppage together with the usual monthly caliper measurements to follow fruit growth. Internal quality development of oranges was checked each month.

A recheck of the trees in the State was made with the State Plant Board personnel doing the field work and the Agricultural Estimates office furnishing the statistical supervision and analysis. Results of the survey show a continued expansion of the citrus plantings in the State.

Establishing an improved marketing informational service for the livestock, dairy, and poultry industries in Florida (FLA-D-4)

This project was initiated during the reporting year. Livestock production in Florida has become one of the leading enterprises in the State. However, in addition to the need for expanding and improving the marketing data relating to livestock, there is a further need to develop a more effective and useful medium for disseminating the information. There are also serious gaps in marketing data relating to the growing dairy and poultry industries in Florida. Better data are needed so that these industries may more intelligently plan their production and marketing programs to meet the needs of an expanding population and to adjust supplies to the unique seasonality which characterizes the local demand for dairy products, poultry, and eggs. Lack of adequate production and marketing information has been the major problem in the development of a sound and profitable business.

Preliminary work on size determination and composition of Florida's dairy herds was started in order to set up sampling procedures for making various surveys including monthly milk estimates. The same procedure will be followed with beef cattle. The annual survey of commercial poultry flocks will be continued. Various marketing data such as movements of livestock and auction or direct sales, as gathered by cooperating agencies, were analyzed for incorporation in a brief monthly summary.

GEORGIA

Improving quality and market outlets for seed (GA-A-2)

The seed marketing program in Georgia was devoted primarily to peanut seed and cottonseed. Department personnel assisted the Georgia Crop Improvement Association in planning and conducting a Cotton Seed Short Course.

Proper methods of drying, delinting, and treating cottonseed to secure high germination were discussed and some of the errors which helped cause low germination pointed out to the cottonseed growers and processors attending the meeting.

The problem of low germination in peanut seed has continued to confront Georgia producers each year. While most of the seed peanuts last year were good, over half the seed produced and stored in one area was found to be too low in germination to meet certification standards, thereby reducing the value of the peanuts by one third below the price received for certified seed. Peanut farmers were advised of the problems of mechanical injury in harvesting and suggestions were made on how growers could help in producing a high quality seed which would meet certification standards and provide a market for peanuts two cents per pound above the market for edible peanuts.

With the addition of a trained grain marketing specialist to the staff, project activities were expanded to include grain grading demonstrations throughout the State for grain producers and buyers. Samples of crotonaria seed were distributed for identification to aid the buyer and producer in supplying crotonaria-free grain to the feed mills, some of which had been considering buying grain from areas outside Georgia. As a result of these schools, grain buyers are now able to get Georgia-produced corn which is free of crotonaria.

The grain demonstrations also provided growers and buyers of grain with information on heat and other types of damage that occur in stored grain, thus enabling them to recognize the first signs of such damage and to take steps to correct the storage condition contributing to the damage. Buyers were provided information for the proper operation and maintenance of moisture testing machines and the seed plant operators were assisted in the adjustment and installation of their machinery for the cleaning, drying, treating, and processing of seed in order that the seed can be put on the market at a higher price.

Improving quality and expanding market outlets for fruits, vegetables, and nuts (GA-A-3)

Significant improvements have been evidenced in the quality of produce arriving on the State farmers markets as a result of assistance provided producers under this project. For example, when the Cull Law was made effective about 5 years ago, 50 percent of the tomatoes coming to the markets had to be re-graded before being offered for sale. In the 1961 season, less than 5 percent of the tomato crop had to be re-graded.

Marketing specialists continued work with five sweetpotato marketing cooperatives in the operation of a centralized storage, packing, and selling program. The combined volume of potatoes was made available to one central sales agency to offer to the trade.

The department helped peach and apple growers develop similar centralized packing and selling agencies. The volume handled by the respective agencies has doubled during the past three years--peaches from 157,996

bushels to 283,370 bushels, and apples from 22,753 bushels to 45,544 bushels.

Prior to the 1961 peach marketing season, the Georgia Department of Agriculture, in cooperation with the Georgia Peach Council and the Georgia Chain Store Council, planned a Peach Promotion Week that resulted in a greater volume of better quality peaches sold in the Atlanta marketing area.

Four commodity groups--milk, eggs, peanuts, and sweetpotatoes--are now operating under the recently enacted "Georgia Agricultural Commodities Act." Marketing specialists of the Georgia department assisted the commodity commission established under this authority to develop quality control and marketing expansion programs.

Improving quality and market outlets for poultry and eggs (GA-A-4)

Major activities under this project to maintain quality and increase market outlets continued in the following areas: Assisting producers in the proper methods of handling, grading, and storing eggs; assisting producers with marketing problems, and establishing new market outlets for eggs; and working with the egg industry in establishing an egg-breaking plant in Georgia for undergrade eggs.

The Georgia department is continuing to work with the State chemists in controlling bacteria count in eggs through proper washing and thus extending the quality for a longer period. This has been an extremely important factor in Georgia's becoming a successful exporter of large quantities of eggs.

Improving quality and increasing value of cornmeal (GA-A-5)

The economic and marketing problems confronting the corn milling industry in Georgia are gradually being overcome or greatly reduced through the activities carried on under this project. Personnel continued to work closely with individual mill operators in assisting in the selection and installation of better processing equipment; modifying existing equipment to get maximum efficiency; improving and expanding existing grain storage; selecting the most desirable variety of corn for milling purposes; improving sanitation practices; and promoting the sale of high quality cornmeal and corn products.

To date, 34 mills have made or are in the process of making technical improvements that will improve the efficiency of their plants, improve their products, and add new products. In addition, storage for milling corn has been increased by 250,000 bushels. The Georgia department continued to sponsor meetings for millers and farmers to discuss their mutual problems.

Two mills have worked out verbal agreements with local farmers for planting the variety of corn desired and the farmers will receive a premium for improved quality and grade of the grain. If this test proves satisfactory, other millers and farmers will work out similar agreements.

Providing State and local agricultural data and market information (GA-D-1)

The tremendous growth of the poultry industry in Georgia coupled with newly apparent inaccuracies in industry statistics created a need for revising estimates of poultry and egg production to provide marketing agencies with reliable indicators on which to base selling programs.

In addition to conducting a weekly survey of hatcheries, an annual survey of broiler growers and contractors, and a monthly survey of commercial egg producers, revisions and improvements were made in several survey procedures. For instance, estimates of chicken and egg production for the years 1957 through 1959 were revised to reflect a truer picture of the poultry and egg industry. In order to improve the survey procedure of making chicken and egg estimates, an improved schedule was devised for obtaining information and the number of samples increased from 500,000 birds per month to over 3,000,000 per month. An additional improvement was planned in chicken and egg estimates through separate estimates of farm flocks, market egg flocks, and hatching egg flocks.

These refinements have resulted in an improvement of the accuracy of estimates of the poultry industry in Georgia and have provided interested segments with better information on which to base production and marketing decisions.

HAWAII

Development of grades and standards for Kona coffee (HI-A-2)

The objectives of this project, initiated during the reporting year, are to develop grades and standards for cherry, parchment, and green coffee, determine specific various factors affecting quality such as color, aroma, flavor, specific gravity, roasting quality, moisture content, and cupping quality that should be incorporated in the standards.

A study of the need for additional market news service covering Kona coffee (HI-D-1)

The experimental market news project was initiated during the reporting period to determine the need for additional information for Kona coffee.

ILLINOIS

Expanding market outlets, developing new markets, and disseminating special market information for agricultural products (fruits and vegetables, poultry, and eggs) (ILL-A-1)

Fruits and vegetables.--The Illinois department continued to work with growers and prospective buyers in the Centralia area where the bulk of the strawberry production is located. New buyers entering the deal accounted for the continued buying competition and as a consequence, producers were realizing higher prices for their berries. Plans were being made to conduct a study on the need and feasibility of organizing and constructing a farmers' auction type market at Centralia.

The successful program initiated last year of marketing high quality peaches in specialized packages was continued. The sale of the two-layer, 20-pound container, requiring less display space and assuring better protection of fruit from quality losses in marketing channels, returned growers cooperating in the project as much per unit as other growers received for a full bushel in the conventional bushel packs.

The marketing information program for buyers of apples and peaches was continued. The newsletter providing current information regarding crop condition, harvest dates, varieties available, expected volume by production areas, and orchard location was sent to about 6,000 potential buyers in Illinois and throughout 24 additional States every three weeks during the season. The guide map on the reverse side of the newsletter was replaced last season with a small State outline divided by production areas. In addition, growers' names, addresses, and phone numbers were listed by areas. Contacts with various buyers indicate the information is well used and has resulted in additional trucks coming to Illinois for fruit.

The department continued its program of working with vegetable growers in southern Illinois. During the winter months, meetings were held with growers at which the advantages of modern packing methods were explained, use of newer packages encouraged, and emphasis placed on the need and advantage of proper washing and waxing of products and volume marketing by size and grade. Daily visits were made throughout the season to the sheds and checks were made with the managers to insure a quality pack and as much uniformity as possible among the different sheds.

Practically all cucumber, tomato, and pepper growers in the area market through a central agency which has packing facilities for preparing products for sale. This method of marketing, which has been encouraged under this project, has resulted in a uniform high quality product being shipped from the area under a few well-established brands. Based on fruit and vegetable market news service figures, prices for Illinois shed-packed vegetables are much higher than for "farmer" packs on terminal markets. For example, shed packed cucumbers brought premiums of 50 cents per bushel, and 10-pound baskets 25 cents per basket.

Department personnel were instrumental in finding processing outlets for second grade cucumbers. This outlet helped keep some of the lower grade produce off the fresh market, thereby improving returns for top quality packs.

Under the apple quality control phase of this project, technical assistance was given growers in packing in cellophane bags, count-type packages, and "Friday" packs. Many growers added equipment with weight-type sizers and also bagging facilities to their graders to enable them to pack in the newer packages.

Meetings were held with the growers to discuss grades and tolerances allowable in these packages. At present, about 40 percent of the Illinois apple crop is being packed in the newer packages which assure a quality pack and usually a better price.

Poultry and eggs.--The department continued activities aimed at maintaining quality and expanding outlets for poultry and eggs. Egg grading schools were conducted for State inspectors, producers, and grading station operators in cooperation with other State agencies. Personnel of the department also assisted the National Egg Council and Illinois Egg Council in planning and arranging an educational exhibit for the State Fair; worked with the Southern Illinois University on an experimental egg marketing program; and continued the dissemination of poultry and egg information through meetings, news releases, radio, and high school classrooms.

Expanding market outlets for dairy products (ILL-B-2)

Lack of personnel to conduct activities under this project made it necessary for the department to suspend operations on this work. However, a marketing specialist was assigned to the project near the close of the reporting period and his activities were concerned with reactivating the dairy program and creating new interest in it. It is planned to initiate an intensive promotion program, stressing nutritional value of dairy products and conducting special programs in schools, restaurants, and retail stores.

Technical assistance to marketing agencies and growers in improving operating efficiency (ILL-C-1)

During the year, a number of fruit growers were assisted in improving and enlarging their packing sheds and in selecting new equipment, such as the washer-brusher combination which can be used for both apples and peaches, or remodeling existing equipment to modernize packing methods. Two new sheds were constructed and equipped with modern machines, and five sheds installed weight-type sizers and bagging machines to pack count-type packs.

In cooperation with Southern Illinois University and the Transportation and Research Division of the Agricultural Marketing Service, U. S. Department of Agriculture, marketing specialists of the Illinois Department of Agriculture conducted a study of the need for new fruit and vegetable marketing facilities in the southern Illinois area. The study was instigated by the designation of 25 southern counties as one of the depressed areas under the "Aid to Depressed Areas Bill" passed by the U. S. Congress during the year. All the data collected during the survey have been carefully analyzed and a report of the findings submitted to the committee established by the Director of Agriculture to study plans for helping the agricultural program in this area.

Collecting new basic data (ILL-D-1)

Work during the year to provide new basic data needed in the marketing of agricultural products included the assembling of information for the

livestock marketing bulletin which completed a 5-volume series on the marketing of Illinois principal farm commodities. Variety surveys of oats, barley, wheat, and soybeans; quarterly livestock surveys, with supplemental reports on monthly patterns of calf and lamb births and a new supplemental report on feeder pigs were also prepared. In addition, the annual survey of the apple and peach tree population was continued with additional information obtained on the proportion of each variety planted. A new series representing orchards of 100 or more apple or peach trees was established in order to reflect commercial potential of apple and peach production.

The first of a 5-year series of surveys was made of volume and variety of small seeds handled by Illinois wholesale and retail seed dealers. Information from these surveys was furnished seed producers and dealers to assist them in making marketing decisions.

Monthly reports were prepared on production estimates, by crop reporting districts, for corn, wheat, oats, and soybeans, and farm stocks of these prepared on a district basis for each quarter.

The semi-annual survey of timber prices was continued. Considerable work was done on enlarging the sample to provide better coverage for minor items and improve the accuracy of the price information. The report on timber prices has reduced speculation in timber products, and as a result of this project, several other States have initiated similar surveys.

Experimental program to develop market news reporting system for livestock sold through local auctions (ILL-D-2)

The cooperators in the experimental market news program handle about 75 percent of the hogs moved through interior Illinois markets and represent about 130 separate buying points, packing plants, and two small terminal markets. Volume and price information from auction markets was added as an integral part of the report. At present, information is being included from 20 auctions considered as being representative of the auction markets in the State. This information is being disseminated through radio, newspapers, television, and the Federal-State Market News leased wire. The report is also carried by Associated Press and United Press News Services.

In addition to the report covering slaughter hog and feeder pig sales, a weekly feeder cattle report was initiated during the year on a local basis to areas most interested in feeder prices. The market news program has received fine cooperation from and acceptance by everyone concerned. Results to date show that the report identified areas where prices were below average and buyers have been forced to raise their prices to meet competition. Also, there has been a definite narrowing of the spread between country point and terminal market prices for hogs. This may be interpreted as an increase in country point prices in relation to terminal market prices. On the basis of the volume of hogs sold through country point markets during the year, this increase meant \$1,000,000 added profits to Illinois hog producers.

INDIANA

Improving quality of agricultural products (IND-A-3)

Dairy.--Work was continued with cream buying stations to upgrade the quality of cream being received. These stations were encouraged to adopt more effective sanitation procedures in handling cream, to observe stricter temperature control of the product, and to operate price premium incentive plans to induce farmers to market a higher quality product. Many stations cooperated in the 4-day cream plan, whereby a 2-cent premium is paid for cream less than 4 days old and all cream over 7 days is rejected.

In addition to the work with cream buying stations, a series of meetings was held during the year for fieldmen, graders, plant operators, and plant management personnel of both bottling and manufacturing plants covering a wide range of topics including milk flavor, grading raw milk quality, chemical residues, mastitis problems, milk product development, and automation. Over 500,000 copies of the series of leaflets on chemical residues were again prepared and distributed through the Indiana Dairy Products Association.

Processed foods.--An important activity under this phase of the project was the training of fruit and vegetable processing plant personnel in quality control and sanitation procedures. Most Indiana processing plants have short operating seasons and cannot afford a full-time staff of laboratory technicians. Under these conditions, it is necessary to train a large number of new technicians each year for the seasonal work.

As a phase of this effort, the Fourth Annual Canner's Technology Conference was held prior to the operating season. Prior to and during the season project personnel visited individual plants and assisted in the solution of current problems. Processors were given direct assistance in applying the latest research findings and technological developments to improve and standardize product quality and increase efficiency. In addition, assistance was given processors who were interested in expanding their operations to include additional forms of present products.

Floricultural products.--Results of the initial survey of the florist industry in Indiana were tabulated and published in the "Indiana Florists Newsletter." This study was made to ascertain the marketing problems and to obtain pertinent information about the individual operations of growers, wholesalers, and retailers.

The second survey of the florist industry was made during the year. Results of the grower and wholesaler sections were published in the newsletter. The analysis of information on retail operations had not been compiled but the results were to be published in a forthcoming newsletter. The information gathered from this survey furnished such data as number of years in business, location and ownership of facilities, percentage of breakdown of total gross sales, out-of-State sales, number and wage of employees, etc.

Expanding outlets for Indiana farm products (IND-B-2)

In an effort to expand the marketing of fruits and vegetables, one of the important phases of this project is the consumer marketing information program. Activities were conducted to inform consumers as to the seasonal availability of various fruits and vegetables, their uses, nutritive value, selection, handling and storage, and current and projected market conditions. Particular attention was given those commodities available locally and in generally heavy supply. Special consideration was given to information which would most readily assist the consumer in selecting and utilizing fruits and vegetables. Written consumer releases were prepared and issued through weekly news services of the Purdue University information office and distributed to newspapers, radio, and television facilities throughout the State. Special releases were forwarded direct to county consumer agents or others in the field of consumer education. Consumers have benefited from the program by being able to purchase high quality fruits and vegetables at reasonable prices.

The Indiana Fruit and Vegetable Supply Report, issued weekly from June through October, was made available to approximately 700 producers, wholesalers, brokers, retailers, and others interested in marketing Indiana fruits and vegetables. Reports were also sent county agricultural Extension offices throughout the State in order that the information might be available for area marketing assistance programs.

County Extension personnel, key producers, and marketing firms in the principal production areas of the State cooperated in the collection of information for this report. Periodic personal inspections of the major production areas were conducted during the season to further evaluate current crop and marketing conditions. From the evaluation and summarization of the information collected, the report was prepared to include only those commodities available in significant quantities and in excess of local demand. In addition to information on the availability of supplies, the report contained information regarding crop conditions, quality, types of shipping units available, and location. Producers, wholesalers, retailers, and others have indicated that the report has been very valuable to them in planning and conducting their individual production and marketing programs and activities. As a result of this service, individual producers have expanded their existing markets as well as developed new ones. In several instances, marketing firms have been brought in contact with new sources of supply.

In addition to the fruit and vegetable supply report, commodity situation reports have been issued during the marketing season. These reports contain information relative to current and future market conditions for specific crops such as strawberries, potatoes, muskmelons, and watermelons, and were disseminated through direct mailing, county Extension offices, producer publications, and three group meetings. The information contained in this report has been extremely useful to producers and marketing firms in planning marketing programs, making decisions as to what product to market, when to sell or store, which market to contact, and how much to move during a given period.

Assistance was given to individual producers, producer groups, and marketing firms in improving marketing methods and practices, and in developing new marketing organizations and outlets through written material, meetings, and demonstrations. Continued assistance, with emphasis on quality control practices, was provided a cooperative organization and individual firms in southwestern Indiana. These individuals and firms also were given technical and economic information as well as actual assistance in improved harvesting, grading, and handling practices; packaging, storage and transportation methods and practices. In addition, personnel directing the project assisted in establishing new market outlets and in developing appropriate marketing programs to service these markets efficiently.

Service work with emphasis on improving existing marketing programs was conducted with individuals and groups in other areas of the State--strawberry and apple producers, greenhouse and truck crop producers, and general vegetable producers--in evaluating local marketing conditions and in appraising or developing new or alternative marketing programs to further expand outlets.

There has been an increased demand from individual producers and producer groups for assistance in solving local marketing problems. In several cases, those who adopted new and improved marketing practices in their operations developed new markets, improved and maintained the quality of their products, and increased their net returns.

Improve efficiency and reduce costs of agricultural marketing (IND-C-2)

In an attempt to insure more orderly marketing of livestock and meat products, many of the activities under this part of the project concerned the analysis of price and supply fluctuations, investigations as to cause, development of models to predict fluctuations through multiple regression techniques, and the development of prediction equations. Monthly seminars were held with management of three of the largest meat packing firms in the State. Persons attending these meetings were brought up to date on the current situation, made their own predictions, and then received an economist's prediction. The firms involved have requested that the monthly seminars be continued and have indicated that information obtained from the seminars has been useful in their day-to-day operations and in making marketing decisions.

In the dairy marketing field, dairy firms have been assisted in solving problems in operational efficiency and business through the use of economic-engineering techniques to control and reduce processing and distribution costs. The possibility of using the electronic computer to formulate ice cream formulas was explored, and formulas were developed on the basis of ingredients available to one firm.

In addition to the work on cost control, information concerning trends in dairy marketing was prepared and disseminated to milk producers and handlers. Assistance was given to both producers' cooperatives and handlers in developing testimony for Federal Milk Order hearings. Specific problems under Federal Milk Orders in which assistance has been given included

transportation differentials, Class I price formulas, establishment of basic prices, production costs, and trends in dairying.

In the work with dairy cooperatives, a 2-day school in milk marketing was held for directors of two cooperatives during which time they were instructed in principles of marketing, prices, and regulatory activities. Detailed analyses were made of various aspects of two proposed cooperative consolidations involving 4 dairy marketing cooperatives--two located in southern Indiana and Kentucky, and two in central Indiana. These consolidations will make more efficient assembly, handling, and surplus disposal of milk possible and enhance the bargaining power of the 3,300 producers involved.

Activities with Indiana's fruit and vegetable industries included an analysis of the southwestern Indiana watermelon industry. The collection of data was completed and final results of the study were being prepared for publication.

Information supplied to the Indiana Cannery Association on stock flows, inventories, supplies, and current price trends affecting the industry has aided canners in improved planning, pricing, inventories, and product lines. In cooperation with the Indiana Farm Bureau, specialists aided in analyzing problems of tomato growers and in organizing a marketing association.

An apple production and marketing cost analysis was made to help apple growers to better understand the meaning and methods of cost analysis.

The Fifth Annual Purdue Marketing Clinic was held, with about 350 managers of marketing firms attending. The problems of credit, using new equipment and techniques, pricing, grading, and competition were discussed in the various meetings of the commodity groups. An immediate result of the clinic was that four managers instituted credit policies within a month following their participation in a discussion of handling credit problems. They had wanted to do this for several years and the Clinic provided the know-how and stimulus to help them get it done.

Collecting and disseminating marketing information (IND-D-4)

A major source of marketing information for Indiana farmers is the monthly Economics and Marketing Information publication with an average monthly circulation of about 15,300. The publication is sent to farmers, vocational agricultural teachers, extension personnel, and agricultural businessmen. A regular feature of the publication is timely marketing information pertaining to principal commodities marketed by Indiana farmers. The report also contains commodity outlook information and articles prepared by staff members on current marketing problems.

In addition to the Economic and Marketing publication, a news release, "Indiana Farm Prices," is published each month. This release provides indexes of farm product prices, feeding ratios, and commodity prices, and about 13,300 copies are sent to individual farmers, Federal-State agricultural statisticians, and leading newspapers.

Improving quality and market acceptance of farm products (meats, eggs, dairy, and turkeys) (IOWA-A-1)

The matching fund program of the Iowa Department of Agriculture designed to improve quality and expand outlets for farm products, was expanded considerably during the past year. Emphasis under this project was placed on market development through quality improvement, promotion, and product directories. Upon completion and adoption of the program plan, the northeast region of the United States was selected as the out-of-State target area for the promotion of Iowa products.

As the initial step in carrying out the program plan, an "Iowa Agricultural Quality Product Directory" was prepared and published. The directory, providing a listing of processors, by products, with volume indications, was distributed to food brokers, buyers, grocers, and others primarily in the target area but made available to anyone interested in buying Iowa agricultural products.

For the initial distribution of the product directory and in line with the selection of the northeastern part of the United States as the target area, an exhibit prepared by the marketing division was set up at the annual convention of the National Association of Retail Grocers in Philadelphia. According to an official of NARGUS, Iowa was the first department of agriculture to have an exhibit at a NARGUS convention.

Personnel of the marketing division planned and developed several other exhibits used at the State fair and other events.

The first Iowa Agricultural Marketing Workshop was held during the year and was attended by 105 industry leaders representing 7 commodity groups. The purpose of the meeting was to give industry representatives an opportunity to assist with the development of details for carrying out the overall marketing programs.

Collecting and disseminating marketing information (IOWA-D-1)

Many releases and reports were prepared and published by the Iowa Crop Reporting Service during the past year to provide additional basic data and marketing information to aid in the improvement and expansion of market outlets for Iowa agricultural products. Some of the subjects covered were:

Quarterly sow farrowing report.--The reports on quarterly sow farrowings, quarterly inventory numbers of pigs and hogs on farms, and the basic production potentials in total as well as by counties, were prepared and distributed to producers, processors, and management people to assist them in the development of orderly production and marketing of hogs.

Livestock inventory.--The preparation and publication of the quarterly report of numbers of hogs on farms by age groups was continued, along with the first of the year inventory numbers of hogs and cattle on farms. These

reports play an important part in the evaluation of future marketings and provide information on shifts in basic livestock numbers from year to year.

Breeds of hogs on farms.--At the request of producers, processors, and marketing firms, a survey of breeds of market hogs on farms was completed and results published during the year.

In addition to the above studies, information was gathered during the year and reports published on quality factor indications and measurements of Iowa corn crops for feed and market, and oat varieties grown in Iowa, and preliminary publication of data on milk and egg production and marketing patterns.

KANSAS

Improving quality of dairy products (KAN-A-1)

The dairy division of the Kansas State Board of Agriculture continued a two-pronged attack on the problem of improving and standardizing the quality of dairy products. Work with processing plants and producers to improve the raw milk supply was intensified. More emphasis also was placed on sanitation and proper quality control procedures in processing plants.

Since most of the sour cream is produced on small farms and marketed through some 300 buying stations over the State, marketing service work in this connection was directed to the training and guidance of buying station operators, so that they might be better prepared to advise and work with producers on quality improvement. For example, the cream grading school held for plant graders and field superintendents included practical training in grading cream and quality improvement so that they, in turn, could assist local buyers with a cream quality program. Continued checks were made of the quality of samples of cream from cream buying stations and when the checking indicated a definite quality problem in any station, the field supervisors visited the buying station and assisted the local operator with grading and procurement problems.

Emphasis on market service work in improving the quality of manufacturing milk was shifted from sediment to bacterial classification of milk supplies by plants. Several of the plants initiating a monthly or semi-monthly bacterial testing program pay producers a premium of from 10 to 25 cents per hundredweight for milk with a good sediment and bacterial classification. One plant, by initiating a routine testing program combined with an informational program for producers, after one year has over 70 percent of its supply holding up 5-1/2 hours on the methylene blue classification.

Since approximately 60 percent of grade A milk producers in Kansas sell bulk tank milk, market service work in the improvement of raw milk for pasteurization has been directed toward working with bulk tank truck operators. During the year, six area driver clinics were held at which emphasis was placed on the importance of sanitary handling of milk. Another phase of this program is the checking of the calibration of farm bulk tanks. As a result of this program, plants and producer associations are purchasing new

equipment, initiating a program of calibrating farm tanks, and instructing bulk tank truck drivers in the proper reading of the bulk tank measuring stick.

Market service personnel continued to assist in checking producer and market samples of milk for presence of antibiotic residue. The incidence of residues decreased from one half of one percent last year to one-tenth of one percent. The field staff was assisted by the lab section in conducting over 500 flowline analyses during the year. After several years experience with market service work of improving cleaning and sanitation of plant processing equipment, results indicate that the incidence of improperly cleaned and sanitized equipment has decreased to the point where high bacterial counts are most frequently associated with equipment in poor repair that is not detectable by visual inspection.

Marketing Division personnel continued their work with processing plants by assisting with the planning of layout and installation of new equipment.

Market expansion and development for agricultural products through promotion and service (KAN-B-1)

Wheat and wheat products.--The program of the Kansas State Board of Agriculture in cooperation with the Kansas Wheat Commission and Great Plains Wheat, Incorporated, was strengthened in an attempt to develop a better marketing program for wheat based on the milling quality, expand the domestic market for wheat and wheat products, and expand sales of wheat in foreign markets.

In cooperation with the Kansas grain inspection department and the statistical division of the State Board of Agriculture, a pilot survey was made of the relative quality of the 1961 wheat crop in various areas of the State. Samples were collected from farm trucks waiting to unload at country elevators and tested for sedimentation value, gluten strength, and protein percentage by the Grain Inspection Department. This was the first time that an attempt had been made to analyze wheat quality at the country level. A knowledge of sedimentation values in determining quality of protein present in wheat will enable farmers receiving favorable sedimentation readings to merchandise their wheat at premiums of 10 cents or more per bushel.

The Kansas Wheat Commission and the marketing division cooperated with the U. S. Department of Agriculture in introducing Redi-Wheat, a canned, cooked, wheat product, to the Kansas market and in conducting a market test of the new product. The market test was conducted in a major metropolitan city in Kansas and sales of the Redi-Wheat and 57 other prepared food items were audited before, during, and after the first phase of the test. During the second phase of the test, the number of products audited was reduced to 11. The third phase was restricted to obtaining weekly sales for the test product only. Another important facet of the program was the coordination of the advertising and promotional efforts during the first four weeks of the test period. The Kansas Wheat Commission and its advertising agency were primarily responsible for carrying out the promotional program. Television,

radio, newspapers, and in-store demonstrations were key elements in the campaign and brought the availability of the product to the attention of about 75 percent of the homemakers in the area. Results of a household survey indicated that about 23 percent of the homemakers in the sample purchased Redi-Wheat at least once.

Redi-Wheat in dehydrated form and packed in 100-pound bags has been included as a commodity for distribution in Latin America and Asia in the Food for Peace Program partly as a result of the work done in Kansas.

Livestock and meats.--Marketing division personnel continued to conduct demonstrations stressing the importance of proper selection and use of economical meat cuts. These demonstrations, aimed at helping consumers in the selection, preparation, and serving of red meats, were held throughout the State for homemaking groups, high school and college home economic teachers and students, and other groups.

Marketing service personnel cooperated with Kansas State University in surveying a large volume supermarket to obtain data needed in improving operating efficiency. The survey covered four departments--dry grocery, meat, produce, and frozen foods, with the marketing division handling the meat phase and assisting with the other three departments.

The following information was gathered during the meat department study: (1) Sales per week, per man-hour, and per linear foot; (2) ordering and receiving procedures; (3) general layout, maintenance, and work methods; (4) cutting, blocking, wrapping, and pricing methods; (5) customer traffic; and (6) merchandising and servicing meat display. After all data had been accumulated, a complete report, with slides and movies, was presented to key personnel of the supermarket and its supplying service wholesaler. Although the supermarket had been in operation only six months and was generally considered one of the most modern and efficient stores in Kansas, the study showed that many inefficient methods had been built into the store.

Many of the recommendations based on the survey have been initiated, and, as a result, total store volume has increased \$24,000 per week. Sales in the meat department alone have increased \$7,000 per week with 10,000 more pounds of meat sold each week.

Assistance was given a 3-unit retail organization in improving meat retailing efficiency. This work was carried on in cooperation with the U. S. Department of Agriculture and Kansas State University, and involved the planning and installation of a central meat operation for the food store chain. At the central packaging installation, located at one of the supermarkets in the chain, meat items were cut, packaged, and priced for all three supermarkets, thereby eliminating the need for traditional in-store meat cutters and wrappers at the other two supermarkets. As a result of this central installation, labor costs have been cut over 30 percent. Also, all fresh and cured meat items were delivered at one location instead of at each individual store which enabled the chain to take advantage of high volume discount prices. This permitted controlled distribution to each store, reducing inefficiency in cutting and the number of rewraaps.

A two-day workshop for retail store meat supervisors was held in cooperation with the Kansas State University. Demonstrations were given to meat supervisors of new ideas in meat retailing, equipment, and work simplification methods developed by the U. S. Department of Agriculture, National Livestock and Meat Board, Kansas State University, and the State Board of Agriculture.

Numerous other activities were carried on during the year under the livestock and meat phase of this project. Included were meat judging schools for 4-H and vocational agricultural members held in cooperation with the State University; demonstrations for institutional buyers, dietitians and cooks in proper buying, storing, preparing, and serving meat; a special pork promotion during the peak pork marketing season which considerably increased the sale of pork during the promotion; and holding demonstrations on meat preparation for school cooks and supervisors in cooperation with the Director of the Kansas School Lunch Program.

Meat certification program.--In the past, State institutions in Kansas have had difficulty in securing meat of satisfactory quality and condition and local packers have been unable to qualify for bidding on institutional purchases because of certain specification restrictions. To help solve these problems, the marketing division cooperated with the State Purchasing Division in writing new procurement specifications, trained institutional personnel in more efficient procedures for receiving and handling meat, in better work methods in processing meat orders, and in the interpretation of new specifications; trained State veterinarian inspectors in meat plants in the use of the new specifications and how to apply them in the certification program; and provided assistance to meat plant personnel in understanding State quality specifications.

As a result of this project, the new specifications are being used by all State institutions; kitchen and food preparation personnel are employed to better advantage and are able to utilize meat purchases with less waste, with savings of up to 50 percent; meat plant inspectors are able to perform a certification function, thereby making it possible for more plants to submit bids; meat plants are better able to understand and fulfill specifications and are supplying a more acceptable product to State institutions.

Egg, egg products, and turkeys.--To provide egg producers with additional incentives to adopt better methods of quality control and improve marketing methods to maintain present market outlets and develop new ones, the marketing division carried on the following types of activities:

1. Helped producers adopt USDA standards for grading eggs from Quality Controlled Flocks by the breakout method.
2. Conducted demonstrations at producer meetings on the breakout method, and judged eggs entered in competition by these producers on the basis of exterior and interior quality as determined by candling and by breakout.

3. Established procedures for Federal-State supervision of flocks under the Quality Control Program.

4. Provided a large wholesale grocery operation with technical assistance and developed facility layout plans for a proposed egg grading plant. Also furnished two large egg producers with preliminary recommendations for proposed improvements in grading room layouts and facilities.

5. Furnished the Kansas Restaurant Magazine with photographs and feature articles, promoting the use of eggs, dried egg products, and turkeys in restaurants and institutional feeding programs.

This assistance was instrumental in helping egg packers to market retail eggs bearing the "Fresh Fancy" and "Quality Control" labels at a price per dozen that was substantially higher than that received for eggs from flocks outside the program. Egg producers now have a better understanding of quality eggs and several who pack eggs for retail stores are making preparations to qualify for participation in the Federal-State Quality Control Program.

Fruits and vegetables.--Crop control programs have curtailed wheat and sorghum acreage in the southwest, making it necessary for producers to turn to crops new to the area as sources of income. Personnel of the marketing division cooperated with the Extension Service, Soil Conservation Service, farm organizations, and local business interests in an effort to develop the production and marketing aspects of this program. During the past year, a marketing association was formed and interest was focused on production and marketing of lettuce, cantaloups, potatoes, castor beans, pinto beans, and seeds.

Preliminary plans for a new warehouse to handle fresh produce, dry groceries, and frozen foods were prepared at the request of a large wholesale grocery firm. This work is being carried on in cooperation with the Extension Service and the Transportation and Facilities Division of the Agricultural Marketing Service of the U. S. Department of Agriculture. The preliminary recommendations were directed toward the produce portion of the operation and have been tentatively approved by the management. Continued assistance will be provided in the future development of plans.

Collection and analysis and dissemination of market data (KAN-D-1)

The Kansas Crop and Livestock Reporting Service continued to gather, compile, and tabulate basic data on wheat quality, wheat variety, commercial grain storage capacity and stocks, quarterly livestock survey, wheat prices by grades, beef cattle prices by classes, and egg and chicken prices by grades and classes.

Wheat.--A total of 8,912 cars was included in the 1961 wheat quality sample representing all but one county in Kansas. Weight per bushel and percentage of protein, moisture, dockage, foreign material, and shrunken and broken kernels were copied from inspection records of Kansas and Missouri Grain Inspection Department offices. Protein contents were adjusted to a 14

percent moisture basis. Data on quality factors were summarized by crop reporting districts and by counties of origin of new crop wheat. The wheat quality survey provides producers, buyers, and millers with current information on quality factors on new crop wheat by counties, such as protein content, that affect market value of wheat.

Data obtained from mail inquiries returned from 6,721 farmers were used in preparing estimates of the acreage of wheat seeded by varieties, for harvest in 1961. The survey indicated a need for planting improved varieties of wheat with high milling qualities to hold the premium market established for Kansas wheat among buyers interested in producing high quality bread flour. In addition, the survey provided millers and other grain buyers with special information as to location of varieties of wheat desired.

The county information on storage provided just prior to harvest on (1) space available for grains, (2) the commercial grain storage capacity, and (3) stocks on hand furnished grain growers and handlers with data useful in marketing the crop. These data were used both to facilitate the movement of wheat to areas having excess space available and to point out areas where storage problems might be expected.

Livestock.--The March 1 and September 1 livestock surveys were prepared and released to supplement the semi-annual estimates of hog inventories, farrowings, and intentions to farrow from the December 1 and June 1 surveys. The March and September estimates provide data on number of sow farrowings by months for the preceding three months and intended farrowings for the following six months. Inventory numbers of all hogs on farms by age groups were also released. The quarterly livestock reports provide farmers, processors, and others with current information to assist them in appraising the current and future prospects for hog marketings.

Prices received by farmers for beef cattle by classes were obtained at selected terminal markets and country auctions. These data were published in the monthly price releases and provided beef cattle producers and others interested in the economy of the livestock industry with more accurate information on the trends of beef cattle prices.

Poultry and egg survey.--The objectives of this survey were to provide information on prices received by farmers for eggs sold on a graded and ungraded basis, price differentials existing between the several grades, the proportion sold on graded and ungraded basis in each grade, prices received for chickens by classes, and the proportion of each marketed, and average prices for eggs and farm chickens by crop reporting districts in the State. Results of the special chicken and egg price survey were the basis for monthly releases and made available to producers to show the monetary advantages of producing a high quality product. Releases were also made available to buying firms, college research people, and others interested in the market structure for Kansas poultry and eggs.

KENTUCKY

Improving quality and expanding outlets (KY-B-1)

Dairy.--The Kentucky Department of Agriculture assisted seven large milk manufacturing companies in West Tennessee and Kentucky in forming the West Tennessee-Kentucky Dairy Development Association for the purpose of promoting manufactured milk products. In conjunction with the new association, the department sponsored a short course for fieldmen where instruction was given on scoring producers' milk on a uniform basis. One of the firms participating in the association reported that the assistance provided by the Kentucky Department of Agriculture in solving milk quality problems enabled the firm to maintain its outlets in the Memphis market which amount to about \$1 million in annual sales.

The department also worked with the three manufacturing plants located in Kentucky in planning facility improvements and installing new equipment.

Livestock.--Assistance to the livestock industry was continued in improved methods of marketing livestock. Activities included arranging for and assisting in conducting sales of feeder pigs and cattle on a graded basis, conducting beef and pork carcass evaluation demonstrations; and organizing special lamb pools, at which prices received for the graded lambs were 25 to 50 cents per hundredweight higher than on regular markets. An outstanding event under this project was the West Kentucky Meat-Hog Carcass Contest designed to encourage the production and marketing of hogs, with a high yield of lean cuts. This show was the first of its kind held in the area and was an excellent example of teamwork on the part of industry, the State department of agriculture, experiment station, and extension service.

Poultry and eggs.--During the year, the Kentucky Department of Agriculture continued its program to improve poultry and egg marketing methods with the aim of increasing producer returns and expanding outlets. To encourage the buying and selling of eggs on a graded basis, marketing specialists conducted 12 egg grading demonstrations throughout the State, as well as special egg quality and consumer promotional demonstrations at 6 county fairs and the State fair.

Specialists were called upon to assist in overcoming a number of special problems in egg marketing. In one case, it was found that the cause of excessive breakage and loss in eggs was the use of improperly sized cartons. On the recommendation of the specialist, the retail chain involved substituted a larger carton and eliminated the breakage problem.

Also during the past year, an owner of a large egg grading station went out of business, leaving many producers in a 4-county area without a ready market for their eggs. The specialist assisted in contacting potential buyers and thus established new outlets for the producers' eggs.

In cooperation with the Extension Service, a leaflet was prepared and published explaining the vital points of the Kentucky Egg Marketing Law. It was distributed to 20,000 interested persons.

Fruits and vegetables.--Heavy rains during the strawberry season last year caused a high percentage of decayed berries in the fields. This situation necessitated a crash training program for needed additional pickers and graders to maintain No. 1 quality in berries being marketed. It is estimated that this action increased returns in many instances by at least \$2 per crate.

Honey.--The department was instrumental in organizing a State beekeepers' association and assisted five local organizations in improving quality and conducting local promotions to increase consumption of honey. Information relating to improved honey marketing practices was published in the Kentucky Beekeepers Quarterly and distributed to approximately 3,000 beekeepers. Specialists arranged a number of meetings and short courses during the year to train beekeepers in more effective management and marketing procedures. This work has resulted in an increase in the quantity and quality of honey being marketed by the Kentucky industry.

New basic data (KY-D-1)

A publication, "Kentucky Commercial Broiler Production," based on a survey of broiler producers made last year, was released during the year and distributed to interested individuals, groups, and agencies. The bulletin included all crop reporting districts and selected county estimates of broiler house capacity, average number of broods sold per year, death losses, total broilers sold, average market weight, average price received for broilers, source of chicks, market outlets, and numbers of cattle, hogs, and sheep on broiler operators' farms.

Last year's broiler survey was followed this year by a survey of commercial egg producers. The survey included information, for selected counties, on numbers of hens and pullets, breakdown of layers as to pure-breds, incross breeds, and other cross breeds; capacity of layer houses, rate of lay, flock replacements, and numbers of livestock on layer flock operators' farms.

Additional information pertaining to the production and marketing of sheep and wool in Kentucky was collected, tabulated, and summarized. These data supplemented preliminary data collected last year which had been released in leaflet form. This additional information was obtained to determine reasons for decline in sheep numbers, and sheep diseases. Sections of the survey dealing with general farm information, sheep and lamb inventory, births and deaths, and sheep and lamb replacements had been summarized and results were being assembled and text prepared for publication, as the fourth and fifth in a series of leaflets.

LOUISIANA

Improving quality and expanding outlets (LA-A-1)

In recent years, work under this project has been concentrated primarily in southeast and northeast Louisiana. Progress made in these areas in

assisting growers and shippers of strawberries and fresh vegetables in improving packaging, grading, loading, transportation, and distribution resulted in requests from other areas and commodity groups for similar services.

Following is a brief breakdown of activities carried on for each of the commodities:

Citrus.--Producers of citrus in south Louisiana were one of the groups to which marketing services were extended during the past year. Traditionally, these producers had been dependent on the New Orleans wholesale market as an outlet for their product. Grading and packaging practices used in moving citrus through this outlet were quite outmoded and tended to preclude wider distribution in Louisiana and other nearby markets. Thus, even though south Louisiana citrus is a distinctive product and the State produces only a small fraction of its citrus requirements, there were frequent periods of disorganized market conditions and depressed prices.

Following a survey among growers to pinpoint problems and determine attitudes toward needed improvements in marketing practices, marketing specialists, in cooperation with local leaders, developed a plan for improvement in grading, packaging, and expansion of outlets beyond that provided by the New Orleans wholesale market. Arrangements were made with retail chains operating in the State for direct delivery to their warehouses and to feature Louisiana citrus in special promotions. To reinforce and extend the promotional effort of the cooperating retailers, the Louisiana department carried on a publicity campaign through the free service of newspapers, radio, and television to inform consumers of the availability of Louisiana oranges and the desirable quality of the locally-produced citrus.

Strawberries.--The project leader cooperated with the Louisiana Strawberry Advertising Commission in carrying out an organized plan to improve packaging, handling, and distribution of the product. Surveys were made in nearby and distant markets to determine the improvements in grading, packaging, and other factors needed for the industry to expand markets and increase consumption of fresh strawberries. These surveys indicated that a shift to the jumble pack and improved plastic-cup, corrugated flat would enhance the competitive position of Louisiana berries in the markets. Recommendations based on these findings were presented to growers and shippers at meetings and through other means prior to the marketing season with the result that about 60 percent of the 800,000-crate 1961 crop was packed in the improved container. There also was a substantial volume jumble packed. Berries packed in the improved container brought a premium of 50 cents per crate over the conventional wirebound 24-pint crate. Substitution of the improved crate also had important cost advantages amounting to 8 cents per crate.

Department specialists also assisted the Commission in planning and conducting publicity and promotional programs designed to alert the attention of the produce trade and consumers to Louisiana berries. For the first time in the history of the Louisiana strawberry industry, fresh strawberries which arrived in Chicago and other markets, were able to meet competition and sell for equal or higher prices.

Peaches.--Department personnel worked with the Louisiana Peach Growers Association in developing a service program to acquaint growers with proper practices to insure high quality peaches, in conducting packing demonstrations, and in developing an intensive promotional program.

Information obtained by marketing specialists during visits with distributors and retailers on needs of the trade for packaging and displaying were passed on to peach growers for their guidance and used by the marketing specialists in assisting retailers set up displays. Newsletters and radio scripts were prepared and used in informing distributors, retailers, and the consumers of the availability of Louisiana peaches.

The combined efforts to find markets for high quality peaches were partially responsible for peach prices remaining high throughout the shipping season and growers reported that for the first time in the history of their industry, demand was so good that they were unable to fill all orders received.

Watermelons.--Working with the Watermelon Growers Association, the project leader developed a complete marketing program for watermelons. The objectives of the plan were to establish a quality control program, organize an orderly system of assembly and shipping, acquaint local markets with the availability of watermelons, and develop a promotion and dealer service program.

Prior to the marketing season, contacts were made with all distributors in major markets in the State and with all produce buyers for major chains. Growers were advised on market sizes and on proper methods of loading in trucks. Regular market news releases were made on radio, television, and in newspapers and special newsletters mailed to distributors and others interested in market information for this commodity. Adequate markets were located which resulted in a strong demand for Louisiana melons. Growers historically sold melons to itinerant truckers and normally considered 25 cents per average melon a good price. During the 1961 shipping season, growers received about 50 cents per melon and based on the approximate 500,000 melons sold, received about \$250,000 additional income as a result of the market service program.

Tomatoes.--Growers in one of the two commercial tomato-producing areas in Louisiana were assisted, in cooperation with the Extension Service, in adopting methods for producing and packing quality fruit. Arrangements were made to have Federal-State inspectors available during the shipping season to assure buyers of a standard pack.

Terminal markets, distributors, and retail outlets in Louisiana and several other States were visited and advised of the volume and quality expected. Information on condition of crop and expected volume was also carried by various news media on a statewide basis. Success of the project was demonstrated by the fact that the demand for north Louisiana green-wrap tomatoes remained good for the entire shipping season with an average price of \$1.10 per lug higher than the previous year, and approximately \$1 higher than the price received by tomato growers in south Louisiana during the same

period. Plans were being developed to expand the program to the southern area next season.

Sweetpotatoes.--In conjunction with the Louisiana Sweetpotato Commission, project leaders continued to work with growers and packers to encourage shipping quality potatoes. Project leaders also visited 31 major cities in 15 States explaining to produce buyers the availability of Louisiana yams. As a result of these activities, the demand for potatoes remained good throughout the season and the price per bushel was higher than normal.

Improving marketing methods and expanding outlets for poultry and eggs
(LA-A-2)

The department continued assistance to poultry and egg producers and processors in adopting the most efficient equipment and techniques so that they could operate successfully in the highly competitive market. Work with egg producers was concerned with proper cleaning, candling, storing, packing, and management practices to assure delivery of high quality products to wholesalers and grading plants. Services given poultry processors included assistance in remodeling existing facilities and in determining proper layout, equipment needs, and other necessary improvements in upgrading the product and reducing costs.

Retailers were shown the benefits of selling poultry and eggs on an official, graded basis and assisted in such marketing problems as proper holding temperatures, displaying, and merchandising.

Numerous other activities under this project included conducting an egg marketing short course in cooperation with the Louisiana University Poultry Department and the Extension Service for producers, processors, and retailers. Marketing specialists also conducted demonstrations and gave talks before hospital dietitians and civic and business organizations and on radio and television to explain grades, procurement buying, etc.

To assemble, develop, and disseminate special market information at the local area and national level for Louisiana agricultural products (IA-B-1)

Information on commodities available for sale in truckload and carlot quantities, by parishes, was again obtained for publication in the monthly Agricultural Produce Availability Report. This service is valuable to both producers in marketing and shippers in locating commodities that would otherwise go unsold or be marketed at distress prices. For example, the drought of 1960 resulted in a critical shortage of livestock feedstuffs in some areas of the State and nearby States. The demand for hay was accelerated, and the availability report facilitated the movement of hay from surplus to deficit areas. The Louisiana Department of Agriculture estimated that the total of these sales was about \$1 million.

To initiate a service program in the field of transportation to improve marketing of agricultural products (IA-C-1)

A realignment of work took place under this project during the year.

Some activities were continued in the area of transportation, including participation in affairs of the Southeast Agricultural Transportation Committee, and in testing and introducing to fruit and vegetable growers and shippers better and cheaper containers, such as the plasti-cup, fiberboard crate for strawberries. However, the main emphasis was shifted to development of a marketing service program for grain. In preparation for this, department specialists assembled background information on the latest advances in grain drying techniques and equipment and marketing procedures, and visited producers and grain marketing firms to become more familiar with existing practices and facility and equipment problems.

This preliminary work has indicated a wide variation in the operating cost and efficiency of plants of similar size and volume, due in part to layout of plant facilities, lack of engineering knowledge, and lack of proper management of men and machinery. New methods of drying were studied with a view of introducing them to plants with facilities adaptable to the new practices. Many of the existing grain bulletins and pamphlets will be updated to give latest methods and recommendations on drying and storage of grain.

Technical assistance to marketing agencies for improving facilities, methods of operation, efficiency and quality of cotton, livestock, and other agricultural products (IA-C-2)

During the past season, over half the Louisiana cotton crop was machine harvested, thereby increasing the load on the gins to separate the added trash from the cotton and also presenting a problem of disposing of the foreign matter. As a result, the project leader responded to 138 requests for aid in training personnel in the care and operation of equipment. In addition, over 95 percent of the gins in operation were visited and assisted with various problems, including the selection and installation of the proper type of equipment.

Training given by the project leader in the operation and adjustment of modern complex machinery resulted in a lower percentage of damaged cotton in the ginning process and a higher and more desirable grade of cotton. Services provided ginners under this project resulted last year in added returns of about \$7 per bale to cotton producers on the 500,100 bales produced.

A list of names and locations of all cotton gins, oil mills, and cottonseed delinting plants was again compiled and printed in pamphlet form. These pamphlets were distributed to gin equipment manufacturers, cotton gin organizations, cotton oil mills, government agencies, and others in the cotton industry.

To assemble, develop, and disseminate special market information for timber products (IA-D-1)

The department continued surveys of wood-using industries in Louisiana to obtain data for the quarterly timber market report. This report, providing prices and market conditions for various timber products is the only comprehensive report of this type available to the industry. It is used not

only by timber producers and buyers to guide their marketing activities but is also used as basic data by the State agency charged with the responsibility of placing stumpage values on timber for severance tax purposes.

By providing pricing information on an area and State basis, the timber market report is useful in stabilizing prices paid for saw timber within similar areas of production and points up the value of different types of timber products.

MAINE

Expanding market outlets for agricultural products (ME-B-1)

Under this project, marketing specialists of the Maine Department of Agriculture provide assistance to industry groups in planning and conducting promotional and publicity programs. Potatoes receive the major emphasis because of the importance of this crop to Maine and the extensive area in which the crop is marketed. Activities to promote and publicize potatoes were again carried on in cooperation with the Maine Potato Commission. Last year, as has been customary, the staff of marketing specialists assigned to the project were briefed, prior to their visits to the markets, on crop conditions relating to volume, varieties, quality, size, prospective availability of new and special packs, freight rates, delivery schedules, and advertising and promotional plans of the Potato Commission. Armed with this information, they went into the markets and implemented the plans of the Commission by working with brokers, wholesalers, and chain organizations to make effective use of promotional material supplied by the Commission, in arranging special promotions in cities and towns in 25 States, and in securing publicity for Maine potatoes through feature articles in newspapers, magazines, and over radio and television. The department's participation in an intensive promotion for Maine potatoes in one market area helped to create a substantial new outlet.

The effort to promote count packs of Maine Russet potatoes through institutional and retail outlets continued. Two packs were involved: the 50-pound institutional size and the retail traypack containing 4 or 6 potatoes. As a result of this promotional work, several shipping point packers developed a thriving business in count packs during the season at premium prices.

Marketing service work on other commodities was reported as follows:

Poultry and eggs.--Market service work was continued with producers, receivers, wholesalers, and retailers to keep them informed on the latest developments in candling, handling, packaging, and marketing eggs. An egg grading and candling demonstration was held for producers desiring to package their eggs under the State of Maine Blue, White, and Red Trademark. Egg inspectors' reports for the year indicated an increase in the number of high quality eggs being offered for sale. With the exception of some of the smaller stores, the bulk of the eggs sold at retail are identified with the Blue, White, and Red Trademark. The increase in quality of eggs offered for sale has resulted in a continued firm demand for Maine eggs in out-of-State markets.

In an effort to increase sales at the retail level, demonstrations were conducted on egg grades, sizes and quality factors, identification marks on the carton and proper handling methods in the home. A specially constructed candling booth was set up in principal egg consuming markets, colored posters were displayed, and informational material distributed to the customers.

The department continued its activities aimed at increasing consumption of poultry. A major aim of this program is to have all Maine (ready-to-cook) grade A poultry properly graded and identified under the State of Maine Blue, White, and Red Trademark. To date, four of the six major poultry processing plants in the State are using the trademark and others have expressed an interest in it.

Meetings were again conducted with service clubs, religious organizations, granges, women's clubs, and other civic organizations to encourage the general public to participate in and conduct more backyard and organizational type chicken barbecues in order to increase the consumption of Maine chickens. In this connection, "Maine Barbecue," a wide screen theatrical short subject which the department produced and released to New York and New England audiences was still being shown to large audiences. Sales of chicken for barbecuing have increased in both the processing plants and in the food market.

In cooperation with the New England Crop Reporting Service, the Maine department continued preparing and issuing weekly statistics showing the number of eggs set in Maine's commercial hatcheries and the daily Poultry Market Price Report containing live weight farm prices paid by processors for chickens and other fowl and the eviscerated price paid by distributors for ready-to-cook chicken and fowl.

Milk.--In order to become more familiar with techniques for increasing quality in dairy products, marketing specialists attended all meetings of the Maine Dairy Technological Association where the most up-to-date methods of sanitation in handling milk, both in the plant and on the farm, were discussed by leaders in these fields. These discussions covered developments in milk processing and flavor problems, their causes and cures. Information obtained by the specialist was then transmitted to dealers and producers who are attempting to improve the quality of their products by following as far as possible the recommendations of the experts.

Among the activities carried on in the promotion of milk and milk products, personnel of the Department conducted meetings of all top personnel of various food chains, independent grocers, and leading dairies to discuss various problems concerned with store merchandising from the view of both the retailers and milk dealers, to explain the summer milk promotion program, and to exhibit available point-of-sale material. Supplementing these meetings, in-store food demonstrations were conducted by marketing agents in several of the larger markets in the State.

The promotion of fluid milk consumption through encouragement of greater participation by schools in the National School Lunch and School Milk Programs was continued. Superintendents and principals of public and parochial schools in Maine were visited for this purpose. Nonprofit summer camps and similar

organizations were also contacted about participating in the program. Proper refrigeration facilities were recommended and financial aid offered, where necessary, for the acquisition of new facilities from funds provided by the Maine Dairymen's Association.

Reports compiled by the Maine Department of Education indicated school milk sales during 1961 were up 1,002,248 half-pints over 1960.

The department staff was instrumental in planning, arranging, and carrying out special dairy promotional campaigns, including June Dairy Month.

Apples.--Activities were continued to assist apple growers, wholesalers, and retailers in improving the handling and merchandising of Maine apples. Special apple displays were again set up at the Maine Retail Grocers' Convention. Throughout the apple marketing season, marketing specialists furnished informational materials to food editors, radio and television stations, and appeared as guests of farm directors and food editors to discuss availability and versatility of apples.

Special promotional programs during the reporting period included a campaign conducted on a statewide basis among all retail outlets in order to stimulate demand for McIntosh apples by arranging displays for apples and apple products at agricultural trade shows. In addition, apple grading demonstrations were conducted and marketing personnel cooperated with the Maine Pomological Society in setting up and conducting a sound merchandising and promotional program for Maine apples.

Maple syrup.--The maple syrup industry was again assisted with publicity, promotion and merchandising for their products. Many articles and pictures concerning the maple syrup industry were distributed to all the news media. Results of the program are evidenced by the fact that Maine stores and gift shops are now stocking maple syrup products in small containers although most of the crop is sold directly at the farm or at farm stands.

Blueberries.--Continuing activities were carried on to promote Maine blueberries and blueberry products. Approximately 75 percent of the "wild" low-bush type frozen blueberries used in the United States come from Maine and are used by almost every large bakery, frozen pie, and muffin mix producer in the nation. Methods of merchandising the Maine blueberry crop have changed to the point where 70 percent of it is marketed in frozen form.

Excellent cooperation was received from all media in publicizing and promoting the product through news releases, radio and television programs, fairs, and feature stories.

Dry beans.--The Maine Department of Agriculture continued to cooperate with the Maine Dry Bean Industry in the development of handling and marketing procedures and in the fields of advertising and consumer education. Marketing specialists arranged displays of dry and canned beans in store windows in selected cities throughout the State, appeared on radio and television programs and furnished information on varieties of dry beans. Demand

for a special cookbook featuring baked bean recipes indicated an increased interest in the use of Maine beans. As a direct result of the emphasis placed on quality by Maine bean packers, there was an evident increase in the demand for beans in the State and many sections of neighboring New England States.

Maintaining quality of and improving marketing efficiency for agricultural products (ME-C-1)

This program is designed to assist operators of retail food stores by introducing better and more efficient work methods in the handling of produce. During the year, work was carried on with two independent voluntary chains operating retail stores varying in size from small neighborhood stores to medium-to-large supermarkets. The marketing specialist worked with the produce manager in a medium size supermarket in determining needed changes, observing traffic flow and studying customer shopping preferences. Recommendations for the replacement and relocation of the refrigerated produce display cases were accepted and installation completed. Display techniques have been improved and plans were formulated for the installation of a produce cooler and more suitable backroom space. As a result of these changes, the quality of merchandise offered has improved, and produce sales after the installation have shown a steady increase.

Marketing specialists also worked with several small neighborhood stores in setting up inventory control systems, improving produce displays and making recommendations for general improvement to make store operations more efficient.

MARYLAND

Improving marketing of grain in Maryland by developing and establishing more efficient marketing methods, practices, and facilities (MD-A-1)

The Maryland Department of Markets was called upon to assist grain dealers on the Eastern Shore with a special problem which arose on shipments of grain to Baltimore. In shipping grain to Baltimore from the Eastern Shore, the customary practice has been for the railroads to issue shipment permits to the grain firms at the Baltimore terminal. The grain firms in turn furnish the permits to the country dealers covering cars of grain purchased. Under this arrangement in the past, country dealers were subjected to modest, if any, demurrage charges. During the grain marketing season of the past year, this arrangement broke down and country dealers experienced what were considered to be excessive charges. Assistance was given the Feed and Grain Dealers' Association in charting a course of action to redress the unfair and discriminatory charges. At the end of the year, a case involving this problem was pending before the I.C.C.

Marketing specialists continued to work with the Feed and Grain Dealers' Association to encourage the grain industry to sell grain on the basis of shipping point grades and weights rather than terminal grades and weights. In shipping grain to the Baltimore and other nearby terminals, country dealers frequently experience delays of two to three months before the cars are

unloaded and the terminal grades and weights are determined. This introduces an element of risk which probably is reflected, in part, in lower prices to grain producers. There are indications that terminal buyers may be willing to buy on the basis of shipping point grades but further negotiation will be necessary to get them to accept shipping point weights.

Staff members provided advisory assistance and assembled and furnished essential data to groups contemplating construction of a soybean processing plant, and a corn drying and storage elevator on the Eastern Shore. The soybean processing plant is under construction.

Other activities during the year included the calibrating of moisture meters for all grain dealers in the State, holding demonstrations in receiving, handling, and grading grain, cooperating with the Extension Service in preparing a "clean grain" exhibit, and preparing and disseminating timely information on supply, storage, and market conditions.

Providing assistance and service to canning and processing plants to improve quality and to expand outlets (MD-A-2)

A significant contribution toward raising the quality level of Delmarva poultry to meet inter-regional competition was the initiation of statistical quality control procedures in the procurement and processing operations. Sampling techniques, a grade factor sheet, and quality control charts were developed to obtain data on the major quality defects causing downgrading of broilers. Following release of the data and recommendations for corrective measures, the participating plants were revisited and plant managers, graders, and key personnel informed of the uses and benefits of statistical quality control and how it applied to their situations. Major grade defect problems and possible causes were emphasized along with key control points. Specialists also visited nonparticipating plants to acquaint owners and managers of the study and the more basic aspects of statistical quality control. A follow-up program has been instituted to provide advice and guidance to the processing plants and to determine results being achieved.

At least 8 poultry processing plants have adopted some form of statistical quality control procedure and utilize data sheets adapted to their individual situation and need. Specific examples of quality improvement among the participating plants follow:

One plant, by concentrating on the elimination of bruises and other major defects, raised its average number of grade A birds from 49 to 75 percent. Disregarding the lowered reprocessing costs, improvement in yield, and increased plant efficiency, the improvement in grade amounts to increased returns of \$93,000 per year. A major secondary result of less crowding, bruising, and smothering in hauling crates was a sharp reduction of "dead-on-arrival" birds. On the average load of 4,500, the percentage of dead birds dropped from a high of 7 percent to about one-tenth of 1 percent.

Two other plants in the study raised their average of grade A birds from 57 to 72 percent and from 35 to 65 percent.

Improving marketing of fruits and vegetables (MD-B-1)

With the increased use of mechanical harvesting machines and increased use of bin or pallet boxes, processors are faced with the problem of securing representative samples from all portions of the box, including the bottom layer. In order to assist with the problem, several sampling methods were developed and given a trial run under plant conditions. One sample dumper was perfected and drawings and blueprints were developed and distributed to many State agencies and processors. Additional plans were developed and prepared that included predesigned built-in methods that may be used by the processor or grower in making plans for initial use and adoption of pallet boxes.

Approximately 200 copies of the annual strawberry letter were distributed to potential buyers and receivers furnishing information on berry prospects, varieties, and anticipated harvest.

Assistance was given sweetpotato producers and dealers in preparing a constitution and bylaws necessary to form the Maryland Sweet Potato Association, which has as its purpose the promotion of sweetpotatoes. In the interest of expanding markets for Nemagold sweetpotatoes, the Maryland growers and dealers joined the Virginia Department of Agriculture and Immigration to conduct a promotional program on a regional basis. The Department of Markets prepared a brochure containing the names and addresses of all shippers in the area for use by both Maryland and Virginia specialists in attempting to expand and maintain outlets for Eastern Shore Nemagold sweetpotatoes. Specialists visited several large wholesale markets in other States during the campaign to promote the sweetpotatoes. The department recognized that emphasis needed to be placed on higher quality standards for Maryland sweetpotatoes. Meetings were held with Maryland growers and handlers on the need for a quality pack and a handbook for sweetpotato graders and packers was prepared and distributed to all interested parties. The department also participated in making plans toward the organization of a National Sweet Potato Council.

Improving marketing of livestock (MD-B-2)

The project leader continued to work with farmers, marketing agencies, meat packers, railroads, Extension Service workers, and others interested in the grading, sorting, handling, marketing, and slaughtering of livestock in Maryland. Assistance was again provided farmers throughout the State in organizing and conducting livestock pools. A total of 19 organized sales were held for feeder calf and cattle, feeder pigs, slaughter lambs, and wool. In all organized sales, prices received by producers were higher than prices received for livestock sold at the farm or on consignment.

In addition to assisting with the organized livestock and wool pools, the Livestock Conservation Program to reduce injury losses of livestock was continued. The 1961 program consisted mainly of illustrated talks on handling livestock from the farm to the packing plant presented at meetings throughout the State, and displaying exhibits on conservation at leading agricultural events.

Improving marketing practices and developing new plans for agricultural products (MD-D-1)

Work under this project was a continuation of the tobacco yield study undertaken in 1959-60 to develop a method for determining average yield per acre prior to availability of final data on quantity marketed. Because yield per acre estimates obtained from the first survey were too high as compared with yields computed at the end of the marketing season based on acreage and marketing records, revised sampling methods were used in the 1960-61 survey. In July, a random sample of tobacco farms was visited and plant counts made in selected fields. From these plant counts, the average number of tobacco plants set per acre for the entire State was estimated. In the late winter and early spring, the same farms were again visited, the average weight of tobacco per stalk calculated, and plant weights used to obtain the average figures for the State. Average yield per acre for the State was then computed by multiplying the average of plants set per acre by the average number of pounds of tobacco produced per plant. Accuracy of the estimates cannot be determined until final figures showing the weight of Maryland tobacco sold are available.

Apple and peach tree survey.--At the request of the Maryland Horticultural Society, an apple and peach tree survey was initiated during the year. A questionnaire was developed and sent to a list of commercial fruit growers. Information obtained from the questionnaire concerning tree numbers, varieties, ages, fruit production, and marketing methods will be tabulated, summarized, and published.

MASSACHUSETTS

Maintaining and improving quality of dairy and other agricultural products (MASS-A-1)

The Massachusetts Department of Agriculture continued activities to improve the flavor of fluid milk and increase milk sales. Producers and distributors were assisted in eliminating and controlling causes of off-flavor of milk on farms, in the processing plants, and through marketing channels.

The marketing specialist assigned to this project furnished milk handlers and distributors detailed information on the causes of milk flavor problems and instructed plant personnel and bulk tank drivers in the detection of off flavors. Students of vocational agricultural classes were also instructed in milk flavor judging and assisted in milk judging contests at the various vocational agricultural school shows.

Providing new basic data for vegetables (MASS-D-1)

Reports issued under this project furnish the Massachusetts vegetable industry and buying agencies with the information needed to make intelligent marketing decisions and to promote orderly marketing conditions. These reports contain local data on distribution of acreage by crops, planting intentions, harvested acreages, yield, and production, and prices received and value of production.

MICHIGAN

Developing methods of certifying virus-free nursery stocks (MICH-A-1)

Progress made under this project in establishing virus-free sources of propagating stock and indexing techniques for sweet and red tart cherries has reached the point where this phase of the work is ready for transfer to a self-supporting regulatory program. Some measure of the progress is indicated by the fact that last year over 275,000 virus-free buds were distributed to cooperating nurseries, representing a 40 percent increase over 1960 bud distribution.

Under the program for certification of strawberry nursery stock, varieties are indexed for virus freedom and propagated for sale to cooperative nurseries. Cooperators may then increase and sell these plants as certified virus free for up to 2 years, after which time new plants must be obtained from the foundation source. During the past season, 257 plants of 15 varieties were grown and indexed in the greenhouse, and 77,500 plants of 6 varieties distributed to cooperators. Success of the program is indicated by the fact that cooperators report the bulk of orders received from fruit growers call for premium priced certified virus-free plants.

Preliminary surveys have indicated a need for an apple certification program in the future when funds and equipment become available. In the meantime, Michigan nurserymen have been notified of the current problem of the possibility of nursery spread of virus resulting from more emphasis being placed on clonal understocks rather than seedlings. Numerous apple types have been checked for suitability as indexing hosts and those qualifying are being increased in the nursery.

Visual inspection procedures of virus diseases on bramble fruit have not been sufficiently effective. Trial plantings of virus-free selections of many varieties have been made to determine if they can be maintained in a virus-free state. A certification program for bramble fruit is a necessity if growers are to produce plants and fruits profitably.

Increasing consumption and demand of Michigan agricultural products (MICH-A-2)

Apples.--Results of surveys conducted on the quality and condition of poly-film bagged apples in retail stores were published and disseminated to the industry.

The survey results show a high incidence of conditional defects due to improper handling practices. The report provides comparisons of the quality difference for different storage and handling methods. Interest in the study indicated by the industry will undoubtedly influence a review of the handling and merchandising methods to maintain quality and assure the consumer a better product.

Cherries.--At the request of the sweet cherry industry in Michigan, a study was initiated on the variation in the quality of cherries delivered to

processors and the effect of a quality incentive payment plan on the economic returns to the producer. Inspection certificates for a 3-year period were examined and analyzed to determine the quality variation and distribution for cherries delivered to processors. The data obtained were provided members of the industry to help them analyze the need for changing present procurement practices from the present straight price basis regardless of quality to a quality incentive payment plan.

Christmas trees.--With over 5,000 commercial Christmas tree growers in Michigan and the increasing demand of buyers for quality trees, considerable interest has been shown by the industry in the grading of trees. To increase the use and understanding of U. S. grades and grade standards on the part of growers and buyers, department specialists conducted a series of grading schools and field demonstrations of grading procedures. By marketing graded trees, growers should realize substantial savings by not harvesting and transporting poor quality trees which, in past years, were unsalable in the marketplace.

Potatoes.--Results of the consumer survey conducted in cooperation with the Extension Service last year indicated that Michigan producers and packers could increase the demand for and their returns from potatoes by packing a uniformly sized product. These results were brought to the attention of members of the potato industry through grower meetings and informal visits to major producers and packers throughout the State. During the past marketing season, approximately 100 growers and packers representing about 10 percent of the total production marketed uniformly sized potatoes. Several packers indicated increased sales at premiums of 30 to 40 cents per hundred-weight for uniformly sized potatoes packed in 10-pound units.

In addition to promoting the marketing of uniformly sized potatoes, efforts were made to improve packing and retail handling practices to reduce the incidence of greening or light burn. A survey of 18 Lansing area retail food stores showed that three stores had potatoes on display with serious greening while 10 stores had potatoes with minor or light greening. Retail store managers were advised on proper handling and display practices to reduce greening and other quality losses.

Use of a window-back bag was suggested to the industry to prevent or reduce the greening in retail stores. This type of bag keeps potatoes less exposed to light, yet allows ventilation and permits the customer a view of the contents.

A follow-up survey of the retail stores showed that as a result of suggested handling improvements and the use of the window-back bags, the incidence of greening has been greatly reduced.

Tomatoes.--Since practically all tomatoes sold on the Detroit Eastern Market are sold "unclassified" in used containers, a wide variation of quality and difference in net weight exists. A project was initiated during the past season to compare returns to growers of tomatoes sold on a graded and "unclassified" basis in both new and used containers. Several thousand new 10-pound, 8-quart tomato cartons, furnished by a container manufacturer,

were distributed to several growers who agreed to cooperate in the study and maintain records of their sales. These cooperating growers were assisted in grading and packing operations and weekly checks were made on prices received for "unclassified" tomatoes in 10-pound, 8-quart cartons. The data are being analyzed and the results will be reported to growers and the trade next year.

Meat and meat products.--The purpose of this new phase of the project initiated late in the reporting period is to assist in the standardization of grading meat and meat products in Michigan. Surveys were started of retail store meat departments to determine present usage of grades at the retail level. Chain store meat buyers, packers, and consumer marketing agents were contacted to enlist their assistance and cooperation. Present Michigan laws and regulations on quality maintenance and grade specifications for meat and meat products are being reviewed.

Improving statistical information on fruits and vegetables (MICH-D-2)

Three major activities were carried on under this project to improve the accuracy of present production and marketing estimates covering apples, cherries, and onions. Objective methods of estimating production were again tested for tart cherries and dry onions. Field counts of randomly selected sample orchards together with the pre-season mailed survey of fruit trees were repeated to obtain indications of changes in the number of bearing trees which is an important factor in forecasting production of the cherry crop.

In addition to testing objective methods of estimating onion production, releases were again issued on the progress of the Texas spring onion crop from mid-January to mid-April and made available to Michigan onion growers and shippers who have storage onions to sell.

Production estimates of apples by varieties continued to be used by the Michigan Apple Council in advising growers on marketing their crop.

MINNESOTA

Certification of virus-free nursery stock (MINN-A-1)

The work under this project is concerned with developing methods for certifying virus-free nursery stock of the stone fruits, apples, strawberries and raspberries. Because of the successful completion of developing such methods for stone fruits, the virus-free program for these fruits has been established on a self-supporting basis in Minnesota and nurserymen are now annually marketing under certification about 150,000 certified virus-free trees as a result of this work. Certification procedures for apples, strawberries, and raspberries are under development.

Investigations were continued in cooperation with the University of Minnesota on the identification and general nature of strawberry virus diseases. Because commercial varieties of strawberries do not readily show the presence of viruses under most environmental conditions, damage is not usually noted until after considerable losses have occurred. One indexing technique is being used with good results. This involves the grafting of

certain selections of the wild strawberry F. vesca on the strawberry plants in question. In addition to increasing the supply of indicator plants F. vesca for indexing purposes, the general condition of the strawberry plants throughout the State was examined and 80 of the most healthy-appearing plants of 7 important commercial varieties selected as possible virus-free sources.

Following preliminary work initiated last year to study virus diseases affecting raspberries, a number of raspberry plantings were visually inspected for those virus diseases which can be readily detected. A supply of virus-free indicator plants Rubus henri was obtained and was being propagated to provide a sufficient supply for use in indexing.

Also in the preliminary stage was the work carried on to study viruses affecting apple trees. A limited survey for disorders was made in the important apple producing areas of the State. Symptoms were observed on 30 trees and the trees marked for future observation. Wood was collected from these trees for indexing into reliable indicator plants in an effort to determine the presence or absence of latent-type virus diseases. An apple tree planting of classified rootstock materials was established. These were being tested for presence of virus diseases and will be used for comparison studies when tests are completed.

Improving quality of Minnesota agricultural products (MINN-A-2)

Personnel of the department continued to work with egg producers and dealers to encourage participation in the Minnesota Quality Egg Program. Egg grading and candling demonstrations were conducted and the quality program explained. The general quality level of eggs sold in Minnesota food stores continues to improve.

The fully equipped mobile bacteriological laboratory was stationed in the southeastern area of the State during the year. Forty-three dairy plants were furnished the service of a laboratory technician in analyzing samples from dairy plants and cheese, butter, and ice cream manufacturing plants. This service is well received by dairy plants, which are assisted in evaluating product quality to comply with State standards and in detecting and correcting or eliminating plant operations or equipment conditions responsible for contamination.

The services of the bacteriological laboratory were again used in making chemical analyses for maple syrup to help producers market a high quality product.

Expanding market outlets for farm products (MINN-B-1)

Poultry.--The Minnesota department worked closely with the Minnesota Turkey Growers Association in efforts to expand the sale and consumption of turkey. Promotions of turkey and turkey parts in outdoor barbecues and the introduction of turkey rolls and other new turkey products resulted in increased popularity and sales of those products. Personnel assisted with and participated in several trade shows, expositions, and statewide radio programs in the turkey promotion.

Eggs.--Efforts were continued to expand sales of quality eggs under the Minnesota Certified Grade AA Quality Egg Program. After the first year of promotional activities which included working with retailers on merchandising practices and special promotions, more than 1,000 cases of grade AA eggs were being sold through supermarkets in two large cities. Prior to the work under this project, the highest grade sold in Minnesota was grade A. Sales of certified grade AA eggs were bringing premiums of 3 to 4 cents a dozen to producers.

Apples.--The well-received market information service for apple growers was continued. The report furnishes apple growers with information on apple movements, varieties and prices and enables the growers to obtain prices in line with current market conditions.

Other promotional activities included: working with the Minnesota Dairy Industry Committee on expanding sales of sour cream and low fat dairy products; actively cooperating with the Russett Burbank Growers Association to acquaint consumers with the baking quality of Minnesota northern-grown Russett Burbank potatoes; and continuing to work with the honey and maple syrup industries in increasing sales of their products.

Providing new basic data (MINN-D-1)

New or additional statistics were continued on crops, livestock, dairy, and poultry. Results of the data collected included: estimates of the flax, oats, and soybean acreage by varieties; location and quality of grain storage stocks; numbers of cattle on farms by breeds; quarterly sow farrowing reports, and hog inventories by age groups; death losses of sheep prior to shearing; reports on milk production; layers and egg production; and supplemental information needed in preparing more adequate estimates of crops and livestock for local areas and the State. Copies of the reports were widely disseminated to producers, marketing agencies, public officials, university staff members, processors, out-of-State firms planning to locate in Minnesota, and others concerned with marketing agricultural products.

MISSISSIPPI

Improving milk handling methods and expanding outlets for dairy products
(MISS-A-1)

The Mississippi Department continued assistance to grade A and manufacturing milk producers in determining and correcting causes of quality defects in milk, and providing such services as calibration of farm bulk tanks to assure accurate measurement of volume of milk marketed. More than 700 farms were visited by department workers to demonstrate proper equipment, cooling, cleaning, and sanitizing procedures to the operators. These services have been helpful to many producers in retaining satisfactory outlets for their milk.

In cooperation with other State agencies, marketing of milk free of antibiotics and pesticide residues was stressed to all milk producers. As a result of this program and the cooperation of Mississippi milk producers, pesticide residues have decreased and the problem of antibiotic residues has abated.

Maintaining quality and expanding market outlets for poultry and eggs
(MISS-A-2)

Specialists of the Mississippi Department of Agriculture continued to assist in efforts to expand outlets and increase consumer acceptance of properly graded poultry and eggs. Quality evaluations were made of eggs offered for sale at the retail level as a basis for determining what actions were needed at the producer, packer, and retail levels to correct quality problems. Problems traceable to the retail operation were discussed with the retailer at the time of the survey and suggestions made for changes in procurement practices, displaying, rotation of stock, etc., needed to improve the situation. In cases where survey results pinpointed the problem as arising at the producer level, department specialists visited the producer and helped him with quality problems.

The Department cooperated with other State agencies in the interest of a quality egg marketing program by participating in egg grading schools and in preparing display and informational material used in State and district fairs.

Improving quality of and expanding market outlets for fruits and vegetables
(MISS-B-1)

Continuing assistance was provided growers, handlers, and shippers in improving quality, packaging, handling, and marketing of Mississippi fruits and vegetables. Following are two examples highlighting service work conducted under the project:

In cooperation with the Truck Crops Experiment Station and the county agent, a vegetable project was initiated in the southwestern area of the State where cotton and other control programs have freed land for new crops. Although adverse weather conditions at planting time limited the size of the project, producers, by following marketing practices recommended by department specialists, found a ready market for the vegetables produced. Plans have been formulated for increased acreage and the adding of new crops to the list being produced.

A group of 35 small growers of fruits and vegetables in a radius of 75 miles of Jackson were encouraged to use facilities provided by the Farmers' Market to retail their produce. These growers were assisted in the proper grading, sizing, and packaging methods and were able to market their produce very profitably as a result of the renewed interest of larger buyers.

Provide basic data and marketing information (MISS-D-1)

The preparation and publication of continuing reports under this project

included the county statistical data report covering crops and livestock, monthly survey of grade A dairies, and the annual inventory of grade A dairies operating in Mississippi as of January 1. In addition, tabulation and analysis of data were completed and reports published on prices received and paid by Mississippi farmers and general statistics relating to Mississippi agriculture.

In cooperation with other State agencies, a special survey was conducted on sweetpotato production in a two-county commercial area; and a special analysis was made by crop reporting districts on the number of herds, milk cows, and milk production. The Southern Regional Technical Grain Marketing Committee was assisted in schedule preparation, sample design, and analysis procedures in connection with a study of the movement of grain and grain products in southern States.

MISSOURI

Expanding market outlets for Missouri farm products (MO-B-1)

Although activities under this project during the reporting period were limited to promotion of apples and watermelons, plans were being formulated to explore the market promotion opportunities of additional Missouri farm products. In cooperation with the Missouri Horticultural Society, the Department specialist contacted apple producers to obtain information on volume of production, varieties, and expected harvesting and marketing periods. These data were published in pamphlet form and over 1,000 copies made available to buyers interested in Missouri apples. Growers and packers were informed of specific requirements of different major markets and assisted in improving grading, sizing, and packing practices. Prior to the marketing season, the specialist worked with buyers in planning merchandising programs featuring Missouri apples.

A buyers' guide for watermelons was again prepared and about 800 copies distributed to potential buyers. This report furnished information on location, estimated acreage, varieties, marketing seasons, and major shipping points and names and addresses of persons to contact for each watermelon producing county in the State.

Providing new basic data (MO-D-1)

Preparation and issuance of the September 1 and March 1 Pig Crop Reports was continued. These reports supplemented the regular December 1 and June 1 reports and furnished hog producers and other interested persons information on future available supplies of market hogs.

Market intelligence service for Missouri farm products at the country point level (MO-D-3)

This project was initiated in July 1961 to test the feasibility of developing a new system of collecting and disseminating marketing data on a local area basis. These data pertain to acreage, numbers, production, crop development, stocks, movement and prices of Missouri farm products.

An initial step in developing this program was the establishment of a Federal-State Market News Service located in Kennett, the center of Missouri watermelon production. Daily contacts were made with watermelon buyers, brokers, and producers and a market news report covering prices, movement, and progress of crop made available to daily newspapers and radio.

The importance of the market reporting service is substantiated by the fact that there was a more orderly season of marketing melons, a more coordinated movement of shipments, and a 25-cent increase per hundredweight to growers over previous years.

In addition to the market news reports on watermelons, market news reports covering Missouri turkeys and grain were initiated late in the reporting period.

MONTANA

Improve quality and expand outlets for agricultural products (MONT-A-1)

In cooperation with Montana State College, the Montana Department of Agriculture continued its work to improve the quality of butter, ice cream, ice cream mix, and cottage cheese. Spot samples of these products were obtained at least six times a year from dairy plants and wholesale and retail dealers. Bacteriological and organoleptic tests of these samples were made by dairy specialists at the college and results of quality determinations sent to the plant or dealer where the spot sample pick-up was made. Included in the report were results of previous tests to enable comparisons of scorings for different periods. A total of 3,416 quality tests were made of the various dairy products during the reporting period. Results of these quality evaluations and tests show a consistent improvement in percentage of samples scoring 92 and over and decrease in samples 90 score and below.

In carrying out the egg quality improvement program, department personnel continued to check refrigeration facilities, and egg handling practices at the wholesale and retail levels. Retail egg dealers were encouraged to use refrigerated display cases to maintain the quality of eggs handled. Results indicate that about 50 percent of the egg dealers are now refrigerating eggs.

An important contribution to the production and marketing of quality eggs is the promotion of a voluntary "gold seal" egg label program. The use of this label on egg cartons is restricted to producers who meet the specified requirements in production, handling, and marketing of top quality eggs.

The number of producers registered under the Gold Seal egg program increased 19 percent over 1960. Eggs marketed under the Gold Seal label returned average premiums of from 3 to 10 cents per dozen to the producers.

Obtaining new basic data (MONT-D-1)

The information relating to wheat protein and wheat and barley varieties

was assembled from questionnaires mailed to wheat and barley growers. Wheat protein data were used to prepare estimates of wheat production for 32 major producing counties grouped into protein categories of 14.0 percent and less protein and 15.0 percent and more protein. Estimates of the average percent protein for spring and winter wheat covering these counties were also prepared. Information obtained on the acreage of wheat and barley seeded, by varieties, was used in preparing a report released to the grain trade and other interested persons. This two-page report contained a State table of wheat and barley varieties with percentages and total acres seeded for 1961 and comparative percentages for 1960, as well as a crop reporting district table of acreages irrigated and nonirrigated, by variety, for 1961. The wheat protein and the wheat and barley variety data provided grain buyers with information on the location and quantity of these grains by detailed categories, which facilitated their buying programs—with much of the saving being passed on to the growers in higher premiums.

Movement of Montana cattle to market and other locations was tabulated and monthly mimeographed reports issued containing current and comparative out-of-State marketing and in-State movements by months, by class, and States of destination. Quarterly publication of the monthly data is being planned. The cattle movement data provided producers, buyers, and shippers with detailed information pertinent to the marketing process. Movement by class and by months indicated the number of animals of various categories which would be available for later marketing. Managers of local markets are interested in the proportion of cattle moved through Montana markets, through out-of-State markets and direct from producers to Corn Belt and West Coast feed lots.

NEBRASKA

Providing basic data and marketing information (NEB-D-1)

As a continuing project, the quarterly surveys and reports on the Nebraska pig crops and hog inventories were prepared and released. These reports are a part of a coordinated program of quarterly pig crop reports covering 10 Corn Belt States and provide hog producers and others with timely basic data on the hog situation which aids them in making appropriate decisions in the production and marketing of hogs.

In addition to the quarterly pig reports, a series of four reports was issued on Nebraska hog marketings in 1960. These reports included data, by crop reporting districts, on (1) age and weight of hogs and pigs sold for slaughter, (2) marketing channels of hogs and pigs sold by classes, (3) hogs and pigs sold for breeders and feeders by age and weight, and (4) age and weight of feeder pigs purchased, as well as marketing channels of sales and purchases of feeders and breeders.

Expanding market outlets for New Jersey farm products (NJ-B-2)

Poultry and eggs.---Service work under this phase of the project was devoted to assisting producers, distributors, and retailers of poultry and eggs in improving quality and expanding outlets.

The New Jersey State Seal of Quality Egg Program includes quality control, source identification, and consumer-oriented advertising and merchandising programs. The effectiveness of the Seal of Quality Egg Program was indicated by the increase in the sale of eggs by licensed egg distributors at premium prices.

At the producer level, marketing specialists visited New Jersey poultry farms to observe egg handling practices and demonstrate improved washing, grading, handling, and storage methods.

Specialists continued to work with retailers and distributors in merchandising and promotional efforts by distributing point-of-sale material made available by the Poultry Products Promotion Council, and in conducting in-store egg handling demonstrations.

The State Seal of Quality turkey marketing program was continued and expanded. Turkey producers were provided technical assistance on the installation and maintenance of plant equipment, sanitation requirements, and grading. Turkey growers qualifying under the State Seal of Quality program marketed their turkeys, dressed and sold at retail on the farms, at favorable prices.

Fruits and vegetables.---The New Jersey Department of Agriculture, in cooperation with the White Potato Industry Council, continued to maintain contacts with potato producers, dealers, and retail organizations in an effort to expand markets for New Jersey potatoes. Buyers were visited in a number of out-of-State markets and advised of the availability and quality of New Jersey potatoes. Point-of-sale material, as well as other information regarding the potato crop, was distributed to the trade and to leading retailers during these visits.

The market for New Jersey potatoes has been expanded as a result of these personal contacts with buyers who had not previously handled them. There has been further improvement in the quality of New Jersey potatoes reaching the trade as a result of this program.

Department specialists also were instrumental in encouraging the construction of many potato storage facilities by their emphasis on the need to lengthen the marketing season.

Assistance was provided the New Jersey Asparagus Industry Council in planning and distributing point-of-purchase material and in making effective use of the display material provided by the council to expand the market for fresh asparagus. Growers were assisted in better grading methods and shown the advantages of marketing a more uniformly graded and properly marked product.

The Apple Industry Council was assisted in its efforts to promote the sale of apples through aid in the distribution and use by wholesalers and retailers of promotional material. These efforts have helped improve the demand for the New Jersey apple crop.

The operation of farmer's roadside markets, qualifying for the New Jersey Certified Farm Market Program, continued to improve. Fieldmen assigned to this phase of the project showed market owners how to redesign and relocate facilities to attract more customers, improve the grade, packaging, and attractiveness of products displayed, and increase efficiency in the handling, preparation and storage of products. Cooperating roadside market operators report larger gross sales and greater net returns.

Improving marketing facilities and methods of handling, grading, and packing farm products (NJ-C-1)

This project was initiated late in the reporting period and no program report was available.

Providing additional basic data (NJ-D-1)

Work carried on during the year for the most part represented a continuation of the projects directed toward the collection and publication of basic data needed for effective marketing program planning. Included in the program was the publication of county estimates of production of major fruit and vegetable crops, chicken and livestock inventory numbers, and milk and egg production. Data were also collected and compiled for the report "New Jersey Truck Crop News" which was published during the fruit and vegetable growing and marketing season. Annual summaries for poultry, dairy, and livestock made available annual and monthly data on the production, sale, prices, and value of the products in New Jersey.

NEW MEXICO

Maintaining or improving quality of poultry and eggs, fruits and vegetables, and other agricultural products (NM-A-1)

Poultry and eggs.--Principal activities under this project consisted of helping egg producers, packers, and retailers improve facilities and handling methods to assure the marketing of high quality eggs. According to inspection service records, New Mexico egg producers are marketing increasing quantities of high quality, properly graded eggs throughout the State. It is estimated that approximately 60 percent of the eggs produced in the State go directly from the farm to retail outlets. This direct marketing not only reflects confidence of buyers as to the quality of the product, but also means a higher return to the producer, as well as a fresher product for the consumer.

In addition to the assistance provided poultry and egg producers in improving grading and storage practices, marketing specialists made numerous surveys of farm handling operations in an effort to increase efficiency and help cut labor costs. In one case, the survey showed that with some changes

in handling procedures and a cost of \$9 for materials, the producer could save approximately \$2,200 annually in labor costs.

Fruits and vegetables.--By demonstrating to growers proper methods of grading, packing and shipping, marketing service personnel are helping the fruit and vegetable industry to market standardized products. There has been a tremendous improvement in the grading of all vegetables, and about half the vegetables shipped from the State carry a Federal-State quality designation.

Expanding market outlets for agricultural products (NM-B-1)

Marketing service personnel continued to work closely with retailers in promoting the sale of high quality eggs. Although sales of New Mexico egg production have been successful, a State Seal of Quality program was initiated by marketing personnel in cooperation with the New Mexico Farm Bureau Poultry Commodity Group. Requirements for qualifying under the State Seal program were being developed. The department anticipated that when the program is adopted, it will provide more impetus to the promotion of high quality New Mexico poultry and eggs.

Assistance given lettuce, onion, tomato, and cantaloup growers in maintaining quality, proper grading, and promotion helped these growers secure greater returns. A plan of orderly marketing of vegetables suggested by marketing personnel was accepted in the marketing of early summer onions. By planning shipments more in accordance with daily market requirements, New Mexico growers received higher prices for their onions.

The department continued to prepare and make available to buyers and distributors information on the location, volume, varieties, and prices of New Mexico fruits and vegetables.

Collecting and disseminating basic agricultural statistics by counties (NM-D-1)

The project was initiated near the close of the reporting period.

NEW YORK

Providing market information and expanding market outlets for agricultural products (NY-B-1)

Ducklings.--A significant and outstanding example of the type of service provided under this project was the assistance furnished the Long Island Duckling Industry in successfully overcoming a disastrous marketing situation caused by: duckling prices being below actual production cost; an all-time low in retailer demand due to inconsistent pricing practices; record high inventories; and lack of sufficient industry organization to carry out an effective program. At the request of the industry, department representatives, acting as coordinators for the project, organized working committees comprised of representatives of industry, government, allied industry, extension service, farm bureau and others, and presented each committee with a detailed outline of responsibilities. Although the program was started late

in the year, the department enlisted the assistance of retailers and food editors to help increase movement of Long Island ducklings during the forthcoming holiday season. Metropolitan New York food advertising agencies were provided basic information about the industry and their help requested in promoting Long Island duckling as a tie-in with their food accounts.

In cooperation with the State Commerce Department and the New York State Broadcasters' Association, a series of spot and feature scripts were prepared and offered to all radio and television stations in the State. Seven hundred "Press Kits" containing information on the Long Island duckling industry, recipes, and photographs were prepared and distributed to food editors of newspapers, magazines, syndicated columns, and advertising agencies. As a follow-up to earlier contacts with retailers, they were informed of the progress of the program and encouraged to continue their support through in-store displays and retail advertising.

Outstanding cooperation and positive results by each of the committees under the direction of the department resulted in a most effective program. Industry reported the greatest movement of ducklings in history, and complete removal of inventories from storage prior to the new production season. New York State cold storage holdings of ducklings were reduced by more than 5-1/4 million pounds during January and February.

As a follow-up to the promotion, the department initiated an extensive marketing survey of the Long Island duckling industry to gather pertinent information for the formulation of an industry-sponsored, long-range marketing and promotion program. The objective of the survey is to obtain data on all marketing outlets and channels through which Long Island ducks moved. Upon completion of the survey and an analysis of the data, a formal and impartial report will be given to the industry. The survey is the first of its kind for the industry and the results will provide a valuable tool in the development of an orderly marketing program for an important segment of the State's agricultural economy.

Maple syrup.--At the request of the New York State maple industry, the department organized and carried out a statewide consumer information program to help stimulate sales of pure maple syrup and maple products. The program was geared to provide food editors of news media with interesting, timely, and factual information about the industry and its products. In cooperation with the Maple Producers Association, department specialists prepared and distributed "Press Kits" containing information about all phases of the industry, feature articles, a map of production areas, and maple recipes. The kits, together with gift packages of maple products, were presented to food editors in every major marketing area of the State. These contacts resulted in excellent news coverage throughout the State. While the 1961 maple crop was the largest in five years, it was moved with good demand and at favorable prices.

The department continued to prepare and issue the weekly maple products report. The report is the only comprehensive source of market information available to the more than 2,600 producers in the State and covers information on weather, supply, and marketing conditions for New York and major competing areas.

Poultry and eggs.--The Empire State Trademark Program continued to be an increasingly effective means of creating interest in quality control, efficiency in handling, and promotion and marketing of poultry and eggs. Wide acceptance of the program was evidenced by the increase to 27 handlers with more than 200 retailers cooperating in the sale of premium priced eggs.

The department cooperated in the organization and development of SPICE (State Poultry Industry Coordinated Effort). Major objectives of the organization are to improve poultrymen's outlook by publicizing the New York State producers' strong position in the Nation, to develop methods of increasing net returns to poultry and egg producers; to develop a program to help poultrymen reduce management costs; and to encourage, promote, and represent the interests of poultry producers and the industry in New York State.

A new concept in exhibiting eggs and poultry at agricultural fairs was developed in cooperation with SPICE and other industry representatives. Special educational, demonstrative, and informative displays were presented at the New York State Fair. In cooperation with the National Broiler Council, data were gathered regarding impressions and consumer response from the 200,000 persons estimated to have visited the displays. This is believed to be the first consumer information poultry show ever held at a large agricultural exposition. Results of these studies, together with a suggested format, will be offered other poultry groups in the Nation.

Department representatives worked with Cornell University, the Poultry and Egg National Board, and SPICE in a city-wide survey to gather data on the effectiveness of promotion procedures and materials. Results of the survey will be given to county poultry commodity groups to use in future promotion.

In addition to preparation of and participation in special poultry and egg promotions, the department continued to cooperate with county and State extension service officials in conducting regional egg grading schools.

Strawberries.--Because adverse weather conditions delayed harvest of the Long Island strawberry crop and brought it in direct marketing conflict with other production areas, the Long Island strawberry industry requested assistance from the department in a promotion program. Perishability of the product necessitated a rapid hard-hitting effort to blanket the entire metropolitan market just prior to full-scale harvesting of the crop.

Working closely with industry, department representatives prepared and distributed to editors and broadcasters press kits, gift packages of berries and recipes, and timely and factual information on the quality and harvest date of the crop. As a direct result of this contact work, thousands of dollars worth of publicity appeared in print.

Potatoes.--The highlight of the potato promotion program was the combining of efforts of Long Island and Upstate New York grower associations in carrying out an effective presentation in cooperation with the department at the

New York State Fair. Industry paid for the exhibit space, supplied potatoes packed in Empire State Trademark bags and hired a home economist to prepare food dishes to show the versatility of New York State potatoes. The department also helped the Long Island potato industry in promoting potatoes at the Long Island Fair. Because of the high attendance from metropolitan New York City, the exposition provided an excellent medium for the dissemination of consumer information.

Market information reports.--Preparation and release of market information reports was continued. These reports included the crop information report covering weather, demand, market movement, acreage, volume, and price for leading fruits and vegetables; weekly apple storage report; a weekly report of livestock moving through auctions by grade, classes, and types; and the weekly Christmas tree report on varieties, quality factors, demand, and movement to market.

Improving marketing efficiency (NY-C-1)

Work under this project to aid in improving efficiency of marketing organizations was expanded to include assistance to retail grocery operations. In cooperation with the U. S. Department of Agriculture and a corporate chain, the program involved inventory control, ordering, work simplification, equipment needs, backroom layout, shelf stocking, and shelf space allocations. Work in seven stores was completed and plans are for extension of this work to all stores in the chain.

Department personnel working on this project developed a special rack to assist store personnel in the sorting of soda bottle returns, which would lower labor costs. A study was being made of the benefits of the rack and the results will be presented to soda distributors who may be interested in constructing and distributing similar racks to retailers.

At the request of a large metropolitan food chain, the department completed a detailed produce department efficiency project. Recommendations submitted to management served as a basis for incorporating the improvements in a test store. Assistance will be given management during construction of several new stores and in their produce warehouse operation.

Work was continued on developing and standardizing packages for cantaloups, cucumbers, and tomatoes. A 12-quart corrugated strawberry tray, designed and developed last year, was redesigned and tested. The new tray can be stacked 15 trays high without collapsing, has remarkable shipping strength, can be reused, and can be manufactured a few cents cheaper than other corrugated trays.

Providing new basic data (NY-D-1)

Activities under this project are designed to improve and expand the crop and livestock data program of the New York Crop Reporting Service. Improvement in the precision of production estimates for crop and livestock items constitutes an important objective of the service. The current emphasis in this connection under this project is on increasing the accuracy of

apple production estimates through objective measurement techniques and probability sampling methods.

Other data being assembled and reported under the project relate to vegetable acreage in muckland areas, stocks of dry beans by varieties and in different types of storage, tonnage of grapes purchased and utilized by New York State wineries and processing plants, and cold storage holdings of apples in the State. The latter report segregates holdings between C/A and other cold storage. This feature makes the report much more useful to the apple industry because of the rapid growth in controlled atmosphere storage facilities and the shift in marketing patterns which this has brought about.

NORTH CAROLINA

Improving quality and expanding outlets for farm products (NC-B-3)

Fruits and vegetables.--Special emphasis under this project has been given to assisting farmers faced with reduced acreage allotments of cotton and tobacco in developing outlets for vegetables for processing. Marketing specialists first determined through personal visits the requirements of processing firms with respect to varieties, grades, quantities and delivery dates of the commodities needed, then worked with farmers in fulfilling these requirements and needs. Direct assistance was given eight processing firms in selecting suitable areas for the commodities desired, in establishing receiving stations, and in developing equitable contracts. Demonstrations beneficial to both processors and producers were given on proper harvesting methods, application of maturity tests, grading, and efficient handling procedures. In several cases, the department found it necessary to organize producers into associations to facilitate the program.

Activities of the department resulted in the following increases in acreages of processing vegetables: Processing-type cucumbers, 5,000 acres; sweet peppers, 300 acres; sweetpotatoes, 400 acres; and snap beans, 1,000 acres. Gross income to producers from these additional acreages amounted to nearly \$360,000.

Department specialists also worked closely with cooperative groups of apple producers in a number of counties in assisting with the installation and proper operation of grading equipment.

Another issue of the fruit and vegetable bulletin listing products available, probable harvest dates, and locations was prepared and sent to 700 buyers, dealers, and handlers in 20 States.

A special effort, in cooperation with the North Carolina Potato Association, Incorporated, to coordinate f.o.b. prices in the 13-county producing area for Irish potatoes prevented wide differentials in prices among the various areas.

Tobacco.--The North Carolina tobacco project is aimed toward improving the handling and sorting of leaf tobacco to meet the current world-wide

competition in the marketing of flue-cured tobacco. With new developments such as bulk curing and loose-leaf sales posing additional problems, department specialists worked constantly with tobacco growers in the preparation of tobacco for market according to standard grades and market demand.

The annual North Carolina Tobacco Report was prepared and distributed to 6,000 growers, warehousemen, dealers, and manufacturers, and the monthly warehouse sales report was prepared and sent to 1,200 growers and representatives of the tobacco industry during the marketing season.

Dairy.--Efforts to increase consumption of milk were again concentrated in the public schools where children were taught the nutritive value of milk and other dairy products. The dairy marketing specialist continued to visit schools and give illustrated lectures and demonstrations on the importance of milk in the diet. In addition, teachers were provided with teaching aids and children given recipe leaflets to take home to their parents. The value of this program is indicated by the steady increase in milk consumption among school children. Consumption of milk through the School Lunch and Special Milk Programs during the 1960-61 school year increased 5 million half pints over the 1959-60 school year.

Promotional efforts directed toward the adult level were extended through newspaper releases, radio and television programs, talks before civic groups, and medical and dental societies.

Poultry and eggs.--Continued assistance was given directly and through egg grading and quality improvement schools in proper methods of handling, washing, candling, sizing, packaging, and farm storage. Egg grading stations were assisted in planning new and remodeling existing facilities. Results of this work show a remarkable improvement in the quality of eggs offered for sale to consumers and farmers were realizing premiums from 2 to 3 cents per dozen for their eggs.

Livestock.--The expanding livestock industry in North Carolina continued to require the services of the department in developing a more efficient means of marketing the increased volume.

Department personnel continued to assist the livestock industry by organizing and conducting livestock pool sales throughout the State. Special, organized feeder calf and yearling steer sales were held in the fall and spring through which a total of 18,788 animals was sold. All cattle sold in the special sales were grouped in uniform lots by weight, grade, breed, and sex. Prices received for the cattle averaged from \$2 to \$5 per hundredweight more than prices of equal quality sold through local auctions.

Sheep producers were also assisted in organizing and conducting 30 lamb pools through which 12,265 lambs and sheep were sold.

The department again contacted buyers and arranged for the collection and sale of mountain and State wool pools. The mountain pool, combining wool pools with southwest Virginia wool, resulted in 78,179 pounds of wool being sold and sales through the State pool totaled 13,675.

Contract feeding of feeder pigs to market weight was being tried on a test basis in North Carolina. With swine producers moving in the direction of larger sow herds, year-round farrowing facilities, and expanded feed floor operations, the department continued to work with producers in establishing satisfactory market outlets.

Improving grain and seed facilities, processing and handling methods to reduce costs and expand outlets (NC-C-3)

During the reporting period, department specialists assisted 22 firms in planning new grain marketing facilities and in remodeling and expanding existing facilities. This assistance resulted in an additional 1,500,000 bushels of commercial grain storage space.

Special emphasis was continued to be placed on the importance of merchandising grain on a grade and quality basis. Numerous meetings planned and conducted by department specialists were held for producers, dealers, and management. At these meetings, demonstrations were held of grain grading equipment, and assistance given in techniques of grain grading, and trends and changes taking place in the grain industry discussed. Direct assistance was given 80 firms in training personnel in the use of grain grading equipment and in determining quality based on grades and 158 firms were assisted in improving plant operations and management.

Although many of the benefits of this work will be apparent over a period of years, the additional storage alone represents a tremendous savings to producers since transportation costs for shipping grain out of State during harvest and returning it later are eliminated, and the loss of grain through insects, rodents, and deterioration is reduced. In addition, premiums of 3 to 5 cents per bushel are returned to producers selling grain to firms merchandising on a grade basis.

Seed producers, cleaners, and processors were assisted in improving the handling, processing, and marketing of their seed. The seed specialist assisted 51 firms with the operation of their seed processing and treating equipment and conducted detailed surveys of 38 seed processing plants to determine the need for improving operation efficiency. As a result of work with the seed industry, there has been an increase in the quality of seed being offered for sale in North Carolina.

Providing technical assistance to agricultural marketing agencies in improving efficiency (NC-C-4)

The division of markets continued to provide technical assistance to marketing agencies to aid them in improving facilities, selecting, and installing equipment and developing operating efficiency.

Cotton and cottonseed.--In cooperation with the USDA Cotton Classing Office, ginnings were assisted in correcting factors causing rough prep and overdrying of cotton. These improvements increased the value of subsequent ginnings from \$5 to \$15 per bale, for an estimated additional return to North Carolina farmers of around \$600,000.

Department specialists also assisted in the planning and installation of new ginning equipment purchased by cotton gin operators, designed a cottonseed drying facility for a major plant breeder in the State; conducted the fiber technology portion of a Cotton Classing Short Course; and participated in the meetings of all organized ginner groups in the State.

Corn mills.---The specialist on this project continued to give individual assistance to corn meal mills in improving product quality, encouraging good sanitation practices, and improving efficiency of operations. As a result of this assistance, approximately 25 percent of the meal produced was of a much higher quality than in past years. A more effective and less expensive method of treating milling corn for insect control was introduced to the milling industry which resulted in a 50 percent increase properly treated corn at less cost to the miller.

Poultry and eggs.---Service work was continued in an effort to improve operating efficiency in existing poultry processing plants and in designing new facilities. Recommendations based on a detailed study of one poultry plant's operation made in cooperation with the U. S. Department of Agriculture pointed out the possibility of saving \$50,000 through the relocation of equipment and improved work methods. Plans were also developed for a completely new poultry plant handling 1,200 birds per hour and an egg handling and grading facility.

Other assistance provided under the project included developing plans for a sweetpotato flaking plant which will be the first of its kind in the country and will provide a market for "Jumbos" and "Strings," formerly dregs on the market. In addition, two slaughter houses were assisted with revisions of floor plans and equipment to meet Federal or State inspection requirements, which in turn, will enable them to increase their market by an estimated 10 percent. Soybean buying stations were planned for two firms in areas which had no nearby soybean markets. The stations will provide a market for from 500,000 to 700,000 bushels annually and save the farmer about 5 cents per bushel in transportation costs.

Providing new basic data (NC-D-1)

During the reporting period, all available data at the State and county levels for peanuts and soybeans were assembled and published. These reports are similar to the publications issued last year for tobacco and cotton. Plans are to issue reports for fruits, livestock and livestock products. Each of the commodity bulletins has made readily available pertinent historical data which is widely used by farmers, marketing and processing firms, and governmental agencies.

NORTH DAKOTA

Improving and maintaining quality of dairy products (ND-A-1)

The department continued its program to maintain quality and improve marketing of milk and dairy products. The periodic testing of raw and pasteurized milk samples collected from farms, dairies, creameries,

and retail outlets was continued as the principal means of checking quality. As a result of this phase of the project, the average bacterial count of grade A raw milk for pasteurization was 14 percent lower in 1960-61 than the previous year. On the basis of bacterial and coliform counts, 85.5 percent of the samples collected from retail outlets qualified as grade A in 1960-61, compared to 81.4 percent in 1959-60, and 46.0 percent in 1953. The percentage of skim milk picked up at retail outlets which qualified as grade A increased 9.5 percent in 1960-61, and chocolate milk increased by 7.6 percent.

Of significance to the dairy industry in North Dakota is the increased construction of cheese factories and milk drying plants. The purchasing of manufacturing milk by these plants, together with purchases by out-of-State plants, has forced a rapid conversion from selling farm-separated cream to selling whole milk. Whereas a year ago, about 1,000 farms were selling whole milk, the number is now estimated at between 5,000 and 6,000. The present number is expected to double within the next few years. During the year, department fieldmen visited these new fluid milk producers to assist them in meeting requirements of the new regulations set forth for the production of whole milk for manufacturing purposes. During these visits, producers were advised on proper milk and barn facilities, adequate cooling and washing facilities, and use of proper milking and milk handling methods. A follow-up visit was made to check progress in adopting the recommended measures.

In addition to the work with producers on quality factors, fieldmen made sediment and temperature tests of milk at various manufacturing plants. When excessive sediment was disclosed, visits were made to the producer's farm to help him correct the problem.

Demonstrating methods of preventing deterioration and contamination of grain in storage (ND-A-2)

The North Dakota Department of Agriculture continued its program to eliminate contamination of cereal grain through improved sanitation and storage practices. In this connection, some of the major activities during the year included:

1. Cooperating with other State agencies in conducting countywide grain sanitation programs, demonstrating rodent and bird contamination prevention techniques through use of rodenticides, storage construction improvements, eliminating rodent harborage on farms, in elevators, and dump ground sites. All counties in North Dakota were contacted at least once in regard to sponsoring a countywide grain sanitation program.

2. Providing technical assistance to 144 town sites and dump grounds where elevators and grain facilities were located and assisting 18 grain elevators and 214 individual farms where severe rodent contamination problem existed. In addition, assistance was provided individual grain producers, handlers, and elevator operators with carrying on the baiting program.

3. Preparing and distributing 5,000 grain sanitation guides for producers and handlers to all North Dakota elevators, ASC offices, county

offices, county agents, and other individuals and dealers associated with the grain industry.

4. Conducting statewide meetings for all segments of the grain industry and participating on radio and television programs to emphasize the importance of the grain sanitation program.

5. Preparing and displaying the grain sanitation exhibit at six county fairs.

Improving methods and expanding market outlets for Red River Valley potatoes
(ND-B-1)

Continuing the program to expand market outlets and improve marketing methods for Red River Valley potatoes, activities engaged in by the department included: (1) Personal contacts with shippers and distributors, (2) convention participation, and (3) preparation and distribution of educational brochures.

Market representatives of the department visited major markets in 20 States and contacted brokers, jobbers, wholesalers, retailers, and chippers to obtain information on preference in potato size and quality, packages, prices of Valley potatoes and other potatoes sold on the markets. This information, together with any special information on market conditions and transportation problems, was reported back to the growers and shippers with suggestions as to how they could expand their market for fresh and processing potatoes.

Promotional activities were continued through the preparation of exhibits identifying Red River Valley potatoes. These exhibits were displayed at national fruit and vegetable conventions and State fairs and emphasized the production, marketing, and nutritional value of fresh potatoes; the chipping potato story and the various processed products from the Red River area.

Three publications were prepared and distributed to potato chippers, shippers, and processors throughout the United States. These were "Chip Story," "Wash Plant Directory," listing names and addresses of potato wash plants, and a brochure designed to interest potential processors in locating future plants in the Red River Valley.

These activities have resulted in noted improvement by shippers in meeting specific requirements of various potato markets, both fresh and process. More attention is being given to grading, sizing, and type of package desired. It is estimated that as a result of improved marketing methods and the promotional efforts of the market representatives, Red River Valley growers were realizing 10 to 15 cents per hundredweight more for their potatoes.

OHIO

Providing new basic data (Ohio-D-2)

The Ohio Department of Agriculture continued its project to provide farmers, marketing agencies, consumers, and others interested in agriculture with basic data and market information.

The quarterly pig crop reports were prepared and released as part of the coordinated project of 10 Corn Belt States. These reports are invaluable to hog producers and others in the livestock industry by making available information on hog inventories and intended farrowings which enables them to adjust hog production and marketings.

The timber price survey, initiated during the previous reporting period, was continued in cooperation with other State agencies. Based on price information received from about 200 buyers, quarterly reports were prepared showing current prices paid for all grades and species of sawlogs, stumpage, pulpwood, charcoal wood, and ferro-alloy wood, by areas. These reports were distributed to growers, sawmill operators, and other persons interested in the marketing of timber.

During the year, the department cooperated with other State agencies in completing preliminary plans for a survey of Christmas tree plantings. No specific information on tree population has been available since the survey made in 1956 by the Central States Forest Experiment Station.

OKLAHOMA

Improving and maintaining quality of agricultural products (OKLA-A-1)

The Oklahoma State Board of Agriculture continued its program to improve milk and cream quality by assisting producers, handlers, and processors on milk quality problems. In addition to the testing of milk and cream samples for pesticide and antibiotic residues, fieldmen visited farms and processing plants and assisted in the proper quality maintenance and handling methods. As a result of the program, approximately 80 percent of the butter made from farm separated cream scored 90, which brought cream producers about 2 cents more per pound. The improved quality of manufacturing milk used for butter and cheese also brought producers additional returns for their product.

The egg quality control program of assisting all segments of the egg industry in proper methods of grading, handling, and marketing eggs was augmented with a State Seal of Quality program. Producers, packers, and retailers were contacted in an effort to encourage the production and marketing of high quality eggs using the State Seal of Quality and assisted in meeting operational requirements of the program. Informational materials and letters explaining the program were prepared and distributed to newspapers, county agents, home demonstration agents, feed companies, radio stations, and various farm organizations. Although the program was just getting underway, one major egg packer participating in the program reported an increase in sales of 20 percent of AA quality eggs at a premium of 2 cents per dozen.

Collection and dissemination of marketing information (OKLA-D-2)

The objectives of the initial survey under this project carried on by the Oklahoma Board of Agriculture in cooperation with the Extension Service and the Poultry Division of the State University, were (1) to obtain up-to-date information on the distribution of poultry according to flock size and geographic location, and (2) to obtain information on the manner in which eggs are prepared for market by producers, and the marketing channels being used. The results of the study will provide the basis for improving monthly egg production estimates.

During the first phase of the survey, a representative of the State Board of Agriculture contacted all county agents, hatcherymen, egg dealers, and feed suppliers to obtain lists of commercial flock operators by size of flock and on a county-to-county basis. The second phase was the actual surveying of the commercial segment by mail questionnaire and enumerative procedure combined. The flocks of 3,200 or more birds were completely enumerated. Flocks with 1,600 to 3,200 birds were randomly divided into two groups of equal size distributed geographically and enumerated by mail survey as were flocks of 400 to 1,600 located in randomly selected counties. The data obtained were being summarized and analyzed and results scheduled for publication.

OREGON

Maintaining quality of filberts during storage (ORE-A-1)

As a follow-up to previous work carried on under this project to maintain quality of stored filberts, additional tests were conducted during the year. The two types of laminated bags used to maintain weights and moisture levels of filberts placed in storage in 3 commercial warehouses proved inadequate and a new experiment was initiated using different packaging materials. Nuts were weighed at monthly intervals to determine weight loss during summer months.

Three cooperators stored 500-pound lots of inshell filberts in 2 mil and 4 mil polyethylene bags, heat sealed, and placed in burlap bags, and 10 mil polyethylene bags, heat sealed, with no protective cover. Two cooperators stored inshell filberts in tote boxes lined with 4 mil and 6 mil polyethylene sheets which were folded over the nuts to form a seal.

Results of the tests showed that:

1. The 2 mil and 4 mil bags placed inside burlap bags at each of the 3 warehouses maintained original weights with no significant gains or losses.
2. Control lots of nuts in burlap bags and in the unprotected tote boxes showed gains or losses in weight depending upon the relative humidities of the surrounding atmosphere.

3. While the 10 mil bag was efficient in preventing losses or gains in moisture, this weight was not recommended because the bag was difficult to handle and easily torn during handling.

4. Polyethylene sheets placed inside tote boxes when properly folded over the filberts, showed practically no change in weight. Where tote box handling of nuts is possible, the use of a 4 or 6 mil polyethylene sheet (or fitted polyethylene liner) offers an economical and efficient means of preventing losses of nuts in storage.

Conclusions of the experiment indicate that it is possible to maintain both weight and quality of nuts in storage so that they can be marketed during periods of low humidity without losses in reduced total weight and consequently reduced returns. The studies on efficiency of packaging films were concluded and the project terminated.

Quality evaluation of potatoes processed or handled in different ways after harvest (ORE-A-2)

Major emphasis under this project was the continuation of previous work on specific gravity tests of cooking qualities of Oregon potatoes. The pilot tests of the specific gravity separating machine constructed and installed at a potato company last season were concluded and evaluated. While the machine was very accurate in making gravity separations, an insufficient rinse caused salt to remain on some of the potatoes which contributed to spoilage. In addition, during rinsing, water was carried via conveyor belts into the tank of brine, causing dilution and requiring constant check of brine for proper concentration. Improvements in the specific gravity separating machine were constructed for testing of late crop potatoes. These changes consisted of adding a separate rinsing section, as well as a drying section to the machine.

The study of consumer acceptance of low and high gravity potatoes was continued in conjunction with the actual machine tests. Using point-of-sale material to indicate best use of each group of potatoes, with suitable recipes enclosed in each sack, three retail grocery stores participated in the selling of the potatoes at premium prices. After one week, evidence of salt on the unsold potatoes necessitated the removal of the potatoes from market.

Because of the newness of the idea of separating, marketing, and cooking potatoes on a specific gravity separated basis, continuing educational and promotional work was carried on with distributors, retailers, and restaurant users of potatoes.

Preserving seed quality through improved handling (ORE-A-3)

Work under this project was continued to determine viability of forage seeds in common packages under commercial storage conditions and to evaluate the efficiency of various packaging materials for preserving seed viability under different storage conditions and in shipments abroad.

Samples from 50 seed lots in 17 warehouses were continued to be checked for seed viability and moisture content at 3-month intervals. Forage seeds were packaged in various thicknesses of polyethylene bags and bags of other material and stored under simulated weather and warehouse conditions. Nine kinds of commercial packaging materials and four bag closure methods were used to package artificially dried chewings fescue seed in two commercial warehouses and two sets of packages shipped abroad via ordinary commercial routes by a seed company.

Previous test results showed that seeds of alta fescue, chewings fescue and sundangrass should not be stored in burlap bags for more than 2 years; mature seed of crimson clover and highland bentgrass could be stored under present conditions for four years, and common ryegrass for five years, and forage seed should be dried prior to shipping during rainy winter months. In addition, under tropical conditions, chewing fescue lasted for three months in heavy polyethylene bags and crimson clover one year. Under constant temperature conditions for two years, the viability of chewing fescue was proportional to the thickness of polyethylene bags; and the viability of crimson clover seed remained high in all polyethylene bags while the control material showed a reduction of 30 percent in germination.

The results from the resealed packages indicated that careful resealing after probing moisture-resistant packages for seed certification and law enforcement samples will not change the protective value of the package. When the tests are concluded, the results on the packaging material and methods will be reported to the seed industry in Oregon.

The project supervisor is being called upon increasingly by seed dealers for advice on proper storage, packaging, and shipping. Thus, the project results are being put to practical use. Work also is being undertaken on the development of more efficient seed drying equipment and procedures.

Develop methods for certifying virus-free nursery stock (ORE-A-4)

In cooperation with other State agencies, the department continued its work to develop methods and procedures for certifying virus-free nursery stock. The 25 Oregon nurseries participating in the program were propagating several thousand trees of the following kinds: Sweet cherries, pie cherries, apples, pears, plums, and peaches.

As part of the program of indexing a portion of scion orchards each year to detect any spread of new infections, during the year 2,623 seed-producing trees or clonal lines of F 12-1 Mazzard for rootstocks from 10 nurseries, and 715 varietal trees from 9 nursery scion orchards were indexed for the complex of virus which react on Shiro-fugen flowering cherry. Results indicated no serious spread of virus into the nursery scion orchards. The virus which was detected was in replacements, or on trees of new scion or seed blocks not previously indexed.

In addition to stone fruits, 300 apple trees from nursery scion orchards were double-budded and indexed on 3 Hopa crabs for latent apple viruses. The high percentage of trees that showed chlorotic leaf spot and stem-pitting complex indicates the tremendous amount of work needed to correct this condition in apples.

Determining best procedures for securing the adoption of research results by processing plants and other marketing agencies in Oregon (ORE-C-1)

Data obtained through a survey of management and other personnel of food processing companies relating to the motivational factors and sources of information which result in the adoption of new or improved products and technological improvements were tabulated and analyzed. The 61 processing plants covered in the survey included processed milk, meat, fruit, vegetables, seafoods, and nuts. Following are some of the results of the survey:

1. Of each 50 ideas known to management, about 25 are evaluated and 15 adopted.
2. Top management decides which ideas are to be evaluated and adopted.
3. There were practically no defined procedures for encouraging, motivating, submitting, evaluating, or handling ideas.
4. There was evidence that written material such as that in scientific and trade journals was the source of only three percent of the ideas followed up and adopted by processing plants.
5. Most ideas (34 percent) originated with other processors; 30 percent were original; 9 percent were suggested by suppliers; and others were from buyers, customers, and reading material.
6. Seventy percent of the ideas known to management were already in use or being considered by processors.

The findings of the survey have been reported at numerous meetings of processors and food technologists throughout the United States, in Mexico City, and in Vancouver, B. C. Summaries have appeared in several news, scientific, and trade publications.

Objective sampling of filbert nuts (ORE-D-1)

The program was continued to develop objective procedures of sampling to improve accuracy of production estimates of the filbert crop, to establish indexes for prediction of size and quality prior to harvest, and to test blossom counts as an early indicator of the filbert crop.

The second annual blossom count was made on a 1/10 portion of each of 380 trees in 191 orchards in the filbert growing area of Oregon and Washington. Because of the many factors affecting production from blossom time until harvest, the collection of blossom count data will be continued to establish the reliability of such method in estimating actual production.

In addition to the blossom count, data obtained in the July field survey of nut counts and weights were adjusted for weight and defect factors, and used in estimating the 1961 filbert crop.

PENNSYLVANIA

Expanding outlets for farm products (PA-B-1)

Two major developments were reported under this project to expand outlets for Pennsylvania farm products through promotional programs and quality improvement. One was the greatly expanded use of radio and television, and the other was the initiation of a pilot program in organized sales of livestock on a graded basis.

A trial run the previous year of promoting Pennsylvania food products on television was expanded to about 30 samples of food gift packages which were exhibited in connection with interview programs on 6 television stations during a 10-day period prior to the Christmas holidays. Department representatives also scheduled guest appearances and arranged television coverage for specific commodity promotions; as well as prepared exhibits of various food products at the Pennsylvania Farm Show, and an exhibit on certified eggs for display at county fairs.

Commodity promotional programs, conducted under this project, continued to be coordinated and publicized through the promotional bulletin issued each month. The publication entitled, "Food Marketing Advisory Council," which included articles on promotional activities, scheduled meetings, and pertinent marketing information, was distributed to about 5,000 persons.

The department cooperated with the livestock industry in initiating a livestock grading program during the year. Personnel assisted in installing a veal calf and lamb grading program at several auctions in the State. By offering buyers uniform lots of graded animals, auction operating expenses were reduced, and producers received higher returns for their graded animals than they otherwise would have received.

Improvements in market organization and facilities (PA-C-1)

The main activity under this project was the initiation of a survey of wholesale food distribution firms in the Scranton, Wilkes Barre, Hazleton metropolitan areas, in cooperation with the U. S. Department of Agriculture. The objectives of the study were to analyze the present wholesale food marketing situation and ascertain the adequacy of existing facilities for present and future needs. In connection with the study, staff members met with industry and civic groups to explain the purposes and intent of the survey, prepared several press releases for newspapers, radio, and television use, and conducted the necessary field work of interviewing 138 wholesale food firms. Data collected from the survey were analyzed, a preliminary report on survey findings presented to the wholesaler food trade, and the information prepared for publication.

A preliminary study was started of livestock auction facilities as a basis for a contemplated program for the improvement of handling and marketing facilities of about 50 livestock markets now in operation.

Providing basic data and marketing information (PA-D-1)

Christmas trees.--One phase of the Christmas tree survey included the collection and issuance of the October, November, and December harvesting and price reports. These reports furnished the industry with information on prices paid growers under contractual agreements, prices paid growers not under such agreements, and expected harvestings. The second phase was the May 1 survey data on new plantings and losses and the mid-January survey conducted following the harvesting season, to obtain data on cuttings by species, and average prices. These reports provided correction factors for adjusting data on current inventories.

Milk.--The survey of milk production and marketing practices, covering all 67 counties, was continued. Data obtained from commercial dairymen through mailed inquiries and personal enumeration were published in quarterly reports and provided the dairy industry with information on milk production, utilization demand, and prices. The quarterly releases were reorganized to present the data on the basis of the three major milk-sheds rather than Crop Reporting Districts.

SOUTH CAROLINA

Improving market facilities for South Carolina agricultural products (SC-C-1)

Continuing activities under this project were aimed at developing alternatives in marketing essential to meet the changing production methods and technologies taking place in South Carolina's agriculture. Emphasis was placed on evaluating processing capacities, expansion of export opportunities, and improvement of farmers' market facilities.

To help meet current and long-range needs for adjusting to changing conditions, several studies were undertaken or completed during the reporting period.

A special area survey was made to evaluate the need and feasibility of a marketing facility in Hampton County to provide an outlet for vegetables produced in the county. On the basis of the completed survey and available current information, it appears that no real need existed for new facilities. There was no indication of any substantial increase in vegetable acreage and growers indicated that the farming trend in the county was away from vegetable production as a major enterprise and toward soybeans, livestock, and timber.

The second area-type survey was an evaluation of marketing facility requirements in Lee County. The purpose of this study was to determine if additional and more substantially constructed space was needed for assembling, grading, and loading of pickling cucumbers for shipment to processors (the space to serve as a base of operation for public cotton weighers in the

county) and whether a centralized market for use by growers and buyers would stimulate production of vegetable crops. The survey disclosed that public cotton weighers no longer made use of the facility since the weighing function was being carried on by gin and warehouse operators, who used their own facilities. With the single exception of a cucumber processor's local agent who used the platform for four weeks during the summer for buying and assembling cucumbers for shipment, vegetable producers and buyers showed no interest in using the facility.

Although the results of both surveys were basically negative, the information provided valuable insight into changes taking place in the agriculture of South Carolina. The trend toward smaller total vegetable plantings is not based on lack of immediate local markets but seems to stem from the actual desire of producers to move in the direction of less intensive cropping systems and full- or part-time industrial employment.

The South Carolina pecan survey initiated last year to determine the economic feasibility of an expanded pecan industry was completed and results published. The survey served to emphasize the increasing interest in pecans as an agricultural industry and indicated an unsuspected increase in pecan plantings during the past 10 years, with a further gain in additional trees predicted during the next few years. On the basis of production potentials, further work will be carried on to evaluate the market potentials of pecans.

A new area of consideration was the export market for South Carolina agricultural products. In this connection, contracts were let for a grain elevator facility which provided a new State-based market for the increasing soybean crop in South Carolina and adjoining States, making possible the development of an extensive export operation in soybean and soybean products.

Utilization and adequacy of market information (SC-D-1)

The Crop Reporting Service continued to provide current marketing information on South Carolina agricultural products to aid producers, processors and handlers in making intelligent decisions for orderly and systematic development of supplies, facilities, and outlets. Much of the data assembled and published was on a county level to fulfill the need for market information on less-than-State basis.

In addition to the preparation and issuance of special releases and monthly bulletins on a variety of crop, livestock, poultry and related data, special surveys undertaken during the year included:

1. A peach tree survey of an important peach producing area that suffered significant losses due to adverse weather and disease. The information on tree numbers by age and variety provided growers, buyers, shippers, processors, and others with a basis for projecting production.

2. The pecan survey fulfilled an urgent need for accurate and reliable basis for projecting estimates which are used by growers, marketing agencies, processors, financial, and transportation agencies.

3. Soybean estimates by counties, made available through the soybean survey provided farmers, marketing agencies, and others with essential and readily available information on the soybean crop. These data were used in problems relating to market facilities and services, marketing practices, and in expanded business operations.

Several other publications based on county and area survey data on major agricultural subjects were being prepared.

SOUTH DAKOTA

Obtaining and analyzing new basic data (SD-D-1)

Quarterly surveys of the South Dakota pig crop and hog inventories were prepared and released as part of the coordinated project of the 10 Corn Belt States.

County estimates of new and timely data were also prepared and issued on chickens raised, milk production, calf crop, irrigated corn, and alfalfa hay. The preparation of data on production and price trends in South Dakota agriculture was completed and a new 98-page bulletin published during the year. The report includes seasonal price trends as related to production and marketing, and trends in prices received by farmers for commodities.

TENNESSEE

Improve marketing methods and expand outlets for poultry and eggs (TENN-A-1)

The Tennessee Department of Agriculture continued activities to improve egg grading and handling and to assist poultry processors in developing efficient plant layouts. Egg producers, packers, and retailers throughout the State were assisted in proper methods of grading, packing, storing, and handling eggs. The service program has encouraged both packers and producers in improving their marketing facilities and practices and has resulted in producers receiving from 1 to 3 cents more per dozen for their grade A quality eggs. During the past year, egg producers, by following recommendations of department personnel, increased their businesses by at least 25 percent.

Department personnel continued to work with poultry processing plants in improving existing facilities, equipment, and operating methods. This service work also included assisting processors with new plant layouts when the need for constructing new facilities was economically justified.

Improving livestock marketing methods (TENN-B-1)

The department continued its service program to encourage the grading of livestock and to promote cooperative sales of lamb, wool, swine, and cattle throughout the State.

Marketing specialists assisted with the grading of wool and livestock sold through 21 wool pools, 12 lamb pools, 21 feeder calf sales, and 36 feeder pig sales.

In the 21 organized wool pools, producers realized prices from 5 to 8 cents higher in the sale of their graded wool. In addition to increased returns of 3/4 cent per pound for lambs and from 1-1/2 to 2 cents per pound for feeder calves, the organized sales for feeder calf sales set the pace and were instrumental in setting an increased price pattern at other markets, thus benefiting all producers of feeder cattle. Producers of feeder pigs marketed through the cooperative sales received an average of \$2 per pig more than they would have received from country buyers. Since the sales were held nearer to the area of production, additional savings were realized from the organized sales through reduced transportation costs and shrinkage.

TEXAS

Improving quality of farm products (TEX-A-1)

Eggs.--Activities under this phase of the project included egg grading, handling, packing, and quality maintenance demonstration sessions conducted by department personnel. Upon request, assistance was provided individual producers, dealers, and handlers in improving their marketing methods. Retailers were encouraged in proper methods of displaying and refrigerating eggs, and advised on the importance of stock rotation. Department personnel also prepared and distributed informational bulletins on egg care, and feature stories on maintaining egg quality were prepared and released through newspapers.

These various activities have resulted in Texas consumers becoming more conscious of the importance of egg grades; losses incurred from breakage during handling have decreased; and the quality of eggs being marketed in Texas has steadily increased.

Watermelons.--In an effort to assist in the orderly marketing of watermelons, the department again gathered and published information on watermelon production. Cooperating with the Crop and Livestock Reporting Service, the Extension Service, and county agents, information was gathered on variety, acres planted, truck and rail facilities, expected maturity dates, and names and addresses of producers and shippers. This information was distributed to local and out-of-State truckers and buyers, and made available to public scales and road stations. The report has been valuable in helping buyers locate desired supplies of particular varieties of melon, and has helped acquaint annual out-of-State buyers with the production areas.

Seed.--The Texas Department of Agriculture continued its program of encouraging the marketing of good certified, registered, or tested Texas produced seed. Demonstrations on the benefits of planting high quality seed were held in various areas of the State. A list of registered and certified seed growers, including variety of seed available, location, and mailing addresses was compiled and distributed.

Dairy and poultry products.--The department continued its cooperation with the American Dairy Association and related organizations in special promotions for expanding sales of dairy products. In addition to actively helping with the June Dairy Month promotion and the special promotion dealing with

eggs, special feature stories were prepared on these products and widely used in daily and weekly newspapers.

Experimental Texas livestock market news (TEX-D-1)

This project was initiated on an experimental basis to provide volume and price data on Texas livestock auction markets. A total of 10 of the largest and most active markets were selected in the major livestock belt. Trained reporters obtained information on sales and the information released to local newspapers, radio, press wire services, and through mailed bulletins. Sales information was also forwarded to the Fort Worth USDA market news office for preparation of the weekly summary. Although the results of these initial efforts met with great enthusiasm within some segments of the industry, subsequent lack of organized support made it necessary to discontinue the project.

VERMONT

Expanding markets and improving quality of fluid milk (VT-A-1)

Vermont's milk flavor program was continued in an effort to increase milk sales by preventing flavor damage. The monthly flavor testing of producer samples of milk was carried on as a regular part of the quality work, with fieldmen assisting in detecting and correcting causes of off-flavor.

Bulk milk haulers, plant fieldmen, route salesmen, and retailers were instructed in milk flavor problems, and plant methods and equipment studied to remove all possible flavor hazards in plant processing and handling. Students of vocational agriculture in all Vermont high schools were also informed of flavor problems and instructed in milk flavor judging.

Effectiveness of the program is evidenced in the continued high per capita consumption of fluid milk in Vermont.

Developing promotional and quality programs to expand market outlets for maple products (VT-B-1)

Activities carried on under the project were designed to maintain and improve the quality of Vermont maple products. Technical assistance provided individual producers and processors resulted in more efficient methods of operation, decreased operating costs, and improved quality of syrup. Department personnel assisted maple producers in establishing a maple producers marketing association which helped stabilize prices and provided a market for excess syrup.

In cooperation with the Extension Service, two schools were arranged for roadside stand operators to encourage more efficient operation of their stands and improve the attractiveness of their displays.

Activities to increase consumption of Pure Vermont Maple Syrup included: special information displays and distribution of maple product samples furnished by the industry; exhibits at State fairs; assisting in the preparation

of the new maple movie "The Miraculous Maple Tree," and working with the various news media in promoting maple products.

VIRGINIA

Improving or maintaining quality of farm products (VA-A-2)

Livestock.--The department continued to assist farmers in organizing and conducting special slaughter cattle sales at which cattle were assembled on special sales days at an auction market, graded by State graders, and auctioned in uniform size and grade groups. During the past year, the seven slaughter cattle sales returned farmers about \$7.50 more per head than they would have received through regular marketing channels.

The increase in the number of farmers raising and selling feeder pigs emphasized the need for detailed information of efficient feeding practices, growth rate that could be obtained with certain feeds and feed practices, and what could be done to obtain a larger number of No. 1 pigs. In cooperation with the Extension Service, the department representative assisted in arranging feeding tests with various types of feeds to evaluate their relative efficiency, and the rate of gain and cut out values of the different grades of feeder pigs. These feeding tests will provide valuable information relative to the accuracy of present standards for feeder pigs in predicting grade and value as slaughter animals.

Eggs.--In an attempt to alleviate the problems of declining local supplies of eggs for egg handlers, the department marketing agent worked with commercial egg producers, marketing firms and hatcheries in establishing a cooperative effort to market quality eggs.

In carrying out the program, commercial producers were surveyed to determine available and prospective egg supplies; producers were informed of available pullets at hatcheries; cooperation between egg handling firms was encouraged; out-of-State outlets were contacted to supplement local supplies, and a temporary clearinghouse was set up by the department to collect information regarding surpluses and deficits of eggs in marketing channels.

Through these combined efforts, egg marketing firms realized a saving of from 4 to 6 cents per dozen in moving surplus eggs and at the same time were able to supply deficits without buying higher priced out-of-market supplies.

Tomatoes.--The decline of tomato canneries in the last few years and consequently reduced market outlets for tomatoes, required the efforts of the department in developing a coordinated program for the industry in combating causes of the decline. Efforts of the Virginia Cannery Association and local canner groups were instrumental in making canners more aware of problems and in instituting necessary action.

Department personnel also assisted a producer cooperative in marketing fresh tomatoes by encouraging a shift from green wrap tomatoes to vine ripened and in developing a complete marketing sales program.

Sweetpotatoes.--A preliminary survey was conducted on the Eastern Shore to provide producers and packers with information on damage to sweetpotatoes inflicted during digging and handling so that conditions responsible could be corrected. Results of the survey indicated that 40 percent of the bruising occurred between the farm and packing shed, and 60 percent of the bruising occurred in the packing shed.

Improving distribution practices and increasing the effectiveness of promotional activities (VA-B-3)

A marketing agent of the Virginia Department of Agriculture continued to work with swine producers in organizing and conducting special feeder pig sales. Swine producers were visited and informed of the requirements of the feeder pig program, buyers were contacted and encouraged to attend the special sales, and meetings and tours were held for the purpose of informing the producers of the program.

During the past year, 17,215 feeder pigs were sold at 32 sales in graded lots at 7 different locations. The pigs sold at the special sales averaged \$4.25 more than the price received for pigs sold at regular auction markets.

The department assisted in organizing and conducting two special sales for native yearling ewes. All the ewes offered for sale were graded and sold in uniform weight and quality groupings. It was estimated that prices received for ewes at the special sales averaged \$1.50 per head more than those sold through local auctions or private sales.

In addition to assisting with the special sales, the department agent visited large volume buyers in several States to determine demand for feeder pigs. Information obtained on these visits revealed a sizable demand for quality feeder pigs if sold in large volume. It was also brought out that Virginia farmers will need to: vaccinate all pigs sold through special sales to meet Interstate Commerce regulations; expand individual sale consignments to attract large volume buyers; and provide a higher percentage of No. 1 quality pigs for successful sales.

Sweetpotatoes.--During the year, the specialist assisted in organizing a sweetpotato marketing cooperative to help growers meet increasing competition from other States in selling canning or small size sweetpotatoes to processors. With the help of the marketing agent, member growers were able to (1) bargain for price for patrons' sweetpotatoes, (2) provide for a quality from which a higher canning yield could be obtained, and (3) provide a dependable flow of sweetpotatoes from the farm to processors during harvest period.

Plans were being developed to organize growers in Virginia, Maryland, and New Jersey in establishing an organizational framework for bargaining with canners for products from the tri-State area. In one Virginia county, the marketing agent helped organize two sweetpotato cooperatives, and by improving packing and shipping a high quality potato to market, growers realized 70 cents more per bushel than market prices received by growers outside the organization.

Implementing the assistance provided sweetpotato growers in selling cannery sweets, the department worked with the sweetpotato industry in planning and developing an industry financed advertising program to increase sales in Northern and Midwestern markets. Funds obtained through a voluntary check-off program were used for paying the cost of point-of-sale material. The marketing agent helped assemble and distribute over 3,000 kits throughout the State of Virginia and Washington, D. C., and major markets in Ohio.

Fruits and vegetables.--The department continued to work with the vegetable marketing association which was organized to help farmers in a five-county area to assemble, grade, package, and sell their products. The third successful year showed a substantial increase in sales, with two-thirds of the volume moving to outlets outside the local market.

The market agent was instrumental in obtaining a new market outlet with the U. S. Quartermaster Corps for vegetables meeting specifications made possible by the washing, waxing, grading, and refrigeration equipment purchased by the organization.

In cooperation with the Virginia State Apple Commission, the department representative continued to assist in developing and carrying out the advertising and promotion programs for apples. The program included personal contacts with wholesalers and retailers to inform them of availability, quality, and source of supplies of Virginia apples, as well as distribution of press kits, point-of-sale material, and radio and newspaper advertisements. These cooperative efforts resulted in producers receiving a substantial increase for their 1960 apple crop.

The work to develop new outlets and expand existing markets for Virginia products was continued. Visits were made to principal out-of-State markets during the year to encourage fruit and vegetable receivers to buy Virginia products. As a result of these visits, the number of cars unloaded from Virginia increased by 292, with an increased return of \$204,289 to Virginia fruit and vegetable growers.

Improving market facilities, equipment and methods of handling, storing, and transporting farm products (VA-C-4)

Wool.--A statewide wool marketing program developed in cooperation with agricultural agencies and the wool industry was continued. Under the program, wool sold through many different wool pools was brought together in three wool marketing associations offering their wool for sale on the same day at a central point. This consolidation of volume paid producers 1 to 4 cents above the Boston quotation on medium wool, and up to 7 cents above prices for similar wool sold in adjoining States.

Eggs.--During the year, department specialists assisted a large egg marketing firm in an attempt to overcome a deficit of \$26,000. To determine the cause of this loss, cost figures were compiled on labor, trucking,

administrative overhead, State grading, cost of products, selling price, grading loss of products, and plant efficiency.

By following recommendations made by the department in improving plant efficiency, increasing volume, and eliminating special egg purchases, the firm realized savings of over \$8,650 for the four-month period following the study.

Transportation.--A program of assistance to agricultural organizations, on transportation problems inaugurated during the latter part of 1960, resulted in the following projects being initiated or completed during the reporting year.

Petition concerning freight rate increase.--An intervening petition on behalf of agricultural interests in Virginia was filed with the Interstate Commerce Commission opposing (1) reduced "free time" for rail loading and unloading cars at ports from 15 to 5 days; (2) additional charge of 5 cents per hundredweight for each of through transit stops on grain; (3) a charge on each factor where combination basis of rates are involved. Proposals one and two were withdrawn while proposal three was amended to allow one charge only on the entire rate involved. On the basis of past tonnage movements it is estimated the final action will result in an annual saving of \$300,000 to Virginia agriculture.

Highway barriers.--A study of highway barriers affecting the movement of farm products in the 27 States east of the Mississippi River was being completed. The published report will include information on registration fees, size and weight limits, fuel tax, driver standards, etc.

Transportation rates of grain.--A study was initiated during the year to determine ways of obtaining reduced transportation rates of grain into Virginia.

Provide producers and marketing agencies with basic data and new and additional market information (VA-D-2)

Veal marketing.--The gathering of information on production practices, number of veals produced, marketing practices, consumer demand, and packers' requirements was completed during the year. The findings of the study revealed considerable variation in quality standards used in grading or sorting veal with most of the volume being sold through local weekly auctions. Consequently, more uniformity of quality and weight was being encouraged, and an information program was being developed to inform producers of market demand.

Dairy marketing.--The third and final phase of the basic survey of Virginia dairy industries was completed and a report published. The publication "Looking into the Manufacturing Grade Dairy Industry in Virginia" includes the story of manufacturing grade milk production, farm facilities and methods, manufacturing facilities, and marketing of manufactured dairy products.

The basic survey as completed provides the most comprehensive State dairy picture in the United States and also provides a broad base for effective work in dairy marketing.

Fruits and vegetables.--With the guidance and direction of a marketing agent, an information center was established in Roanoke by the local fruit growers association where information on apples could be collected and disseminated to each packinghouse each day. Packinghouses were informed of the quality and quantity of trucking apples available, buyers' demand for graded fruit, quality of fruit being sold, and any special sales in the area. Maps were prepared showing the location of each packinghouse and were distributed to truckers, filling stations, and truck stops.

As an aid to the apple industry in determining where Virginia apples were sold and volume sold in each market, a study made by the department provided detailed breakdown by cities, States, and foreign markets. The study also related apple sales by channels of distribution, chain stores, cooperative buying organizations, wholesalers, and various consignment outlets, and included information on types of pack and methods of selling.

WASHINGTON

Improve methods of marketing farm products (WASH-B-1)

In order to comply with repeated requests from Washington farmers and out-of-State buyers for names and addresses of buyers of various Washington farm products, the department initiated a project to compile such a directory. The names of commission merchants, bonded dealers and cash buyers, as well as farmer cooperatives, were divided into 11 main commodity sections and the various commodities which a buyer normally purchases listed in front of each name through use of code numbers. The published directory was distributed to interested persons and received very favorable response from the industry.

The department continued the preparation and publication of a weekly report on current market information, crop prices and volume, and livestock price reports and production conditions. Nearly 2,500 copies of the weekly report were mailed to agricultural interests throughout the State.

As a follow-up to the hay marketing survey completed last year on problems of transportation, grading and financing, the department was instrumental in organizing two hay marketing associations. Activities were being directed toward arranging a working agreement between the Dairy Federation and the hay growers' association to increase transportation efficiency by routing trucks and insuring continuous hauling. With this type of cooperative venture, it was estimated that nearly \$3 per ton can be saved by Washington farmers on as much as 300,000 tons of hay per year.

During the reporting period, department representatives worked closely with various producers and agricultural groups explaining issues and basic concepts of enabling legislation substituted for the 1955 Enabling Act then under question. Following a favorable decision on the 1955 Act and

successful passage of the new Act, additional meetings were conducted to explain advantages of being under one or the other of the two Acts. As a result, five commodity groups (dry peas, beef, eggs, mint, and lamb) were seriously considering formation of commissions to do research, promotion, and improve grading and marketing facilities.

The Washington Department of Agriculture again conducted a survey of berry processors not under contract with the Washington-Oregon Berry Growers Association to obtain prices paid for red raspberries. These prices, together with tonnage, were compiled into a State weighted average price. This figure was used by the Association for final settlement of their crop, which under contract with processors, is determined by the difference between the agreed upon base price and the State average price paid for red raspberries.

Providing basic information (WASH-D-1)

In response to a great demand for copies, the series of county data bulletins prepared and issued for all 39 counties last year was being revised rather than reprinted in view of the changes brought out in the 1959 Census. One of the big advantages to the State has been the use of the bulletins by industrial firms looking for sites.

WEST VIRGINIA

Expanding market outlets for agricultural products (WVA-B-1)

Livestock.--Marketing specialists of the West Virginia Department of Agriculture assisted livestock producers, livestock organizations, and livestock auction markets in conducting 66 organized cattle and feeder calf sales during the reporting period. This assistance consisted of helping in field inspection of calves, planning for sales, setting coordinated sales dates, assisting in grading and classifying the animals, and informing buyers of sales dates, time, place, and number of head. A total of 54,000 cattle and feeder calves were sold through the organized sales, netting producers from \$3 to \$4 per hundredweight more than they would have received through regular channels.

Marketing assistance was also provided in organizing and conducting feeder pig sales. The pigs were consigned well in advance of the sale and information pertaining to the sale prepared and mailed to prospective buyers. On the sale date, the pigs were assembled at a livestock market, classified and graded as to size, color, and quality. Through these sales, 1,155 pigs were sold at from \$4 to \$5 per hundredweight above prices received through other marketing channels. In conjunction with the feeder pig sales, assistance was also given purebred swine producers in conducting two purebred sales.

Specialists continued to work with lamb producers by assisting in classifying and grading lambs for market. Through this service, lamb producers who marketed lambs when they reached their peak marketing condition realized an average of \$2 per hundredweight more for their lambs.

Forest products.--The Forest Products Marketing Program developed last year was continued and expanded to provide farmers, landowners, sawmill operators, and timber buyers with current market information.

Marketing specialists of the department assisted in collecting and compiling information used in preparing the Forest Products Newsletter. This publication provided information on the availability of forest products and also woodland practices, and was distributed to farmers, landowners, and sawmill operators.

A pilot logging marketing program was started during the year and a full-time forester employed to assist in efficiently harvesting and marketing the woodland crop on a pilot basis. Marketing assistance was provided 20 cooperators during the year in connection with such operations and problems as marking timber, making a cruise report, contacting sawmills, setting up stumpage prices, and developing management plans.

Since the forest products project was initiated, a definite forestry movement is underway, with wood utilization plants getting top consideration. These coordinated efforts will help solve some of the many marketing problems of West Virginia forest products.

Tobacco.--A tobacco marketing specialist continued to assist growers of burley tobacco in proper methods of harvesting, grading, and preparing tobacco for market. Growers were also advised on how to pack tobacco in baskets at the warehouse to make an attractive package and better display of their product.

Eggs.--Department personnel continued to assist producers in maintaining egg quality by demonstrating proper handling, grading, and storage practices. Based on recommendations made by the marketing specialists, several egg producers have modernized their facilities, installed refrigeration and other new equipment. Marketing personnel assisted in developing an additional egg receiving station where all egg grading is under the direction and guidance of marketing specialists. After one year of operation, 128 producers using the station received an average of 15 cents more per dozen for their eggs than when sold as unclassified before the station was established.

Seal of quality.--Activities were being continued under the West Virginia Seal of Quality program to encourage consumer acceptance of products identified with the quality label. This quality identification was used on West Virginia agricultural products such as apples, eggs, honey, jellies, hams, buckwheat flour, and corn meal.

Fruits and vegetables.--In addition to the continuing program of working with farmers and orchardists in the proper grading, packaging, and marketing of apples and peaches, marketing specialists, in cooperation with the West Virginia Horticultural Society, again conducted a survey of the apple and peach crops. Information obtained from the growers on orchard location, volume, grade, varieties, and prices was published and mailed to 856 truckers. As a follow-up to the mailed brochure, department personnel visited several States and personally contacted brokers, buyers, truckers, and other potential buyers and provided them with detailed information on

the production and marketing situation for apples and peaches.

To stimulate improvements in the marketing of fruits and vegetables, grading demonstrations were conducted during the year for producers, FFA members, vo-ag teachers and other agricultural personnel. Quality factors were stressed in produce marketing and demonstrations given in proper harvesting, packing, and grading. As a result of these schools, many requests were received from individual farmers for assistance on the farms in grading and classifying produce.

Other products.--Assistance was continued in marketing black walnuts and May apple roots. Information on estimated crop, quality, and availability of black walnuts was used to develop outlets with shelling plants. During the past year, the 1,200,000 pounds of walnuts harvested brought \$48,000 new dollars into the State.

A new market outlet was established for May apple roots. By following instructions on methods of preparing the root for market, farmers were able to sell their roots through local farmers' markets and received \$36,000 last year.

Collecting and disseminating basic data (WVA-D-1)

Forest products.--In cooperation with other State agencies, the department continued to collect data and publish the Forest Products Market Information Report. The report provides information on current prices paid by sawmills and other buyers for specific timber products. This information helps producers realize full market prices for their timber products.

Dairy and poultry.--The department continued the compilation and publication of current information on the dairy and poultry industries. These monthly bulletins provide the latest data on production trends, prices, costs of feed and supplies, and the national outlook for these commodities.

WISCONSIN

Improving quality of dairy products (WIS-A-1)

Dry milk powder.--Following adoption of a grade A powder code by the State of Wisconsin in the fall of 1959, dairy marketing specialists of the department instituted a program to assist dairy manufacturing plants in upgrading the quality of powder to meet grade A requirements. During 1959-60, this assistance program enabled four plants to qualify under the code. This past year, 1960-61, the combined powder production of these four plants averaged about 100,000 pounds per day, of which slightly more than one-half met grade A requirements. Since grade A powder returns a price premium of one cent per pound, this resulted in an additional \$18,000 of income to the plants during the year.

Department specialists continued work with these four plants to increase the percentage of powder of grade A quality and made contacts with five additional plants seeking assistance in qualifying for grade A powder production.

Grade A powder has a vast market potential since it is designed for use in fortifying grade A fluid products such as modified skim milk, buttermilk, cottage cheese, and all other cultured dairy products requiring high quality ingredients.

Ice cream and ice cream mix.--Investigation of poor quality ice cream and ice cream mix was continued in an attempt to discover causes of poor quality and initiate corrective measures. The re-use of fluid milk products returned from commercial sales outlets was found to be a major contributing factor to poor quality. Samples were collected at fluid milk plants utilizing returned fluid milk products in mix and also at creameries where the products were sold. Because results of the bacteriological study showed a high percentage of returned products unfit for human food consumption, further work will be continued to eliminate the present undesirable conditions. In most cases, a careful review of the mix ingredients, mix manufacturing procedures, storage and handling, and freezing operations revealed possible sources of contamination. These conditions were reported to management so that a program to correct the conditions and to replace defective equipment could be established.

Antibiotic surveys.--Surveys dealing with the antibiotic adulteration of milk were continued. In the 1959-60 surveys, 9,839 samples were tested with an overall percentage of 6.9 percent showing some degree of inhibitory substance. Of the 9,839 samples, 1.3 percent were in levels of .05 units of penicillin, or its equivalent. Progress in overcoming this problem is revealed by the fact that only 4.6 percent of the samples showed the presence of inhibitory substances, compared with 6.9 percent the preceding year; also that of the 1960-61 samples only 0.4 percent had levels of 0.05 units of penicillin or more as against 1.3 percent in 1959-60.

Providing technical assistance to producers, manufacturers, and distributors in marketing and business organization (WIS-C-1)

Dairy.--Assistance was continued to be provided dairy processing and marketing cooperatives by developing cost information and its relationship to patrons' returns. Forty cooperatively organized plants in 36 counties marketing 3.4 billion pounds of milk received confidential reports of their operating and transportation costs as compared to average high and low costs in similar types of operations. The study of the report of operating costs by the management and directors of the cooperatives has prompted careful attention in improving the accounting and processing activities of the cooperatives. Plans for re-routing and consolidating farm milk pick-up routes have maintained or reduced the cost of milk procurement.

A cooperative dairy merger that included 1,200 patrons provided improved marketing opportunities and a reduction of hauling subsidies that meant a saving of \$40,000 to the cooperatives involved. Over the 5-year period that the comparative analysis has been in effect, the average cost of processing in butter manufacturing plants that sell their skim milk has been reduced from 36.5 cents to 21.5 cents per hundredweight.

Fruits, vegetables, and tobacco.--At the request of apple growers in Wisconsin and Minnesota, information on local movement of apples to market, current prices being paid, condition of apples, volume, and variety was collected and reported to growers, shippers, and buyers. This market information program was carried on in cooperation with the Wisconsin Apple Institute and the Minnesota Fruit Growers Association during the apple marketing season. It was estimated that over 1,200,000 bushels of apples were moved during this period.

Representatives of the department also cooperated with the Extension Service in developing a program designed to acquaint fruit and vegetable producers with USDA grade standards, and encouraged proper packing and handling methods.

The successful grading and handling demonstrations held in one area for apple producers resulted in a group of producers joining together to employ a sales agency to market their apples. The agency contemplates using the services of a Federal-State inspector and selling all apples on an inspection certificate basis.

Tobacco.--Assistance was provided tobacco growers in preparing tobacco for market and in acquainting growers with new tentative standard grades for Wisconsin cigar binder tobacco. During the year, activities included conducting eight grading demonstrations for growers and dealers; preparation and distribution of a marketing newsletter containing suggestions on grading and sorting tobacco for market; and special news releases on purchases prepared and released to radio, newspapers, and television outlets in tobacco areas. The new standards were readily accepted by the warehousemen, and many producers adopted procedures and methods to prepare their 1960 crop according to them. Tobacco graded and prepared in accordance with recommendations made at the grading demonstrations brought price premiums of as much as 2.5 cents per pound.

Honey.--At the request of the Wisconsin State Beekeepers Association, the department of agriculture assisted in developing a program for marketing honey. In cooperation with a committee appointed by the association, the department organized a "Honey Marketing Day" at which producers and potential buyers were assembled for the purpose of negotiating for the purchase and sale of honey. At the Honey Marketing Day, the first held in the history of the Wisconsin industry, a total of 43 honey producers and nine buyers from four States participated in the event. Approximately 300,000 pounds of honey were sold at an increase of one cent per pound.

Cherries.--The department continued to assist in administering the Red Tart Cherry Marketing Order by meeting with the Advisory Board on important marketing decisions and giving guidance and assistance to the Wisconsin Red Cherry Growers, Incorporated, in their advertising and promotion program for red tart cherries. The department also helped set the 1960 rate of assessment on all cherries delivered for processing, and of the total of \$12,911.48 collected in assessments, \$12,500 was awarded the Association in carrying out provisions of the marketing order.

Livestock.--Activities to assist producers and industry groups in improving the marketing of Wisconsin livestock was continued. Through the use of exhibits, live grading shows, and carcass grading demonstrations, producers and buyers were encouraged to market livestock on a graded basis. In addition to conducting the Junior Livestock Exposition for the purpose of training rural youth in proper grading procedures and quality identification, the annual Wisconsin Spring Market Hog Show was held for producers of commercial and purebred hogs on a statewide basis.

Continuing activities carried on by the department to encourage better handling and marketing practices of livestock included: the program formulated to improve marketing of dairy heifer calves through out-of-State channels under a producer certification program; conducting the Wisconsin Beef Futurity Show and Sale of purebred and commercial beef animals; cooperating with the National Livestock and Meat Board and the Wisconsin Livestock and Meat Council in conducting a series of consumer programs on cuts and uses of meats; and assisting producers in organizing and operating special local and area livestock sales.

Providing new basic data (WIS-D-1)

Dairy.--The Federal-State Crop and Livestock Reporting Service continued the preparation and distribution of the popular publication "Wisconsin Dairying." The reports contained information on the dairy industry that included a summary of milk production, dairy products manufactured, milk prices, butterfat tests, cold storage stocks, and feed costs. Included in each publication were feature articles on herd size trends, milk marketing methods, and dairy products manufactured, by counties.

Livestock.--The Wisconsin Quarterly Livestock Report was prepared and circulated to about 10,000 livestock producers, marketing agencies, processors, and others interested in the livestock industry. These reports included charts and tables showing trends in cattle on feed, pig crops, feeder pig outshipments, sows farrowed, livestock slaughtered, prices and outlook prospects.

The marketing data on Wisconsin feeder pigs was continued to be made available to producers. This special monthly report supplied industry with information on prices, average weights, and number and seasonality of feeder pig outshipments to other States.

As an aid to supply information to the expanding beef cattle industry in Wisconsin, a survey was initiated to obtain information on beef animal procurement type, production, and marketing. Results of the survey were being tabulated for publication to show beef type cattle market supply, geography, seasonality, marketing and procurement pattern, and price trends.

Information on location, supply, and distribution of broilers, turkeys, and eggs had been summarized and results were being printed for distribution. The proposed publication will also include tables showing marketing trends for the State as a whole.

Data had been summarized and were in process of publication showing geographic distribution of calf market supplies, calf outshipments to other States, and seasonality of such market movement, relative levels of dairy and beef type supplies by county, and marketing and price trends.

During the year, an apple grower survey was completed and a summary of variety data by age of planting published in "Wisconsin Commercial Apples, Supplies, and Marketings--Variety Issue." The second phase of the survey dealing with supply areas was being prepared for publication.

SOME RECENT MARKETING PUBLICATIONS BY STATES

ALABAMA

Graders' Guides on Sweetpotatoes, Cantaloups, Green Corn, Cucumbers, Watermelons, Green Beans, Lima Beans, Summer Squash, Sweet Peppers.

FLORIDA

Size of Fruit and Droppage Rates Influence Total Citrus Production, Florida Crop and Livestock Reporting Service, Orlando, July 1961.

GEORGIA

1961 Report of Georgia State Farmers' Markets, Georgia Department of Agriculture, Atlanta, April 1961.

Poultry Facts, Georgia Crop Reporting Service, Atlanta, May 1961.

ILLINOIS

Illinois Agricultural Marketing Statistics--Meat Animals and Wool, Illinois Cooperative Crop Reporting Service, Springfield, December 1961.

IOWA

Number and Size of Farms--Geographic Patterns in Iowa, Iowa Crop and Livestock Reporting Service, Des Moines, June 1961.

Iowa Agricultural Quality Product Directory, Iowa Department of Agriculture, Des Moines, 1961.

KENTUCKY

Kentucky Commercial Broiler Production, Kentucky Crop and Livestock Reporting Service, Louisville, June 1961.

Market Outlets and Sources of Price Information for Kentucky Sheep and Wool, Kentucky Crop and Livestock Reporting Service, Louisville, December 1960.

Kentucky Marketings and Cash Receipts from Lambs, Sheep, and Wool, Kentucky Crop and Livestock Reporting Service, Louisville, May 1961.

LOUISIANA

Louisiana Cotton Gins, Cotton Seed Oil Mills--Cotton Seed Delinting Plants, Louisiana Department of Agriculture and Immigration, Baton Rouge, January 1961.

MICHIGAN

The General Quality and Condition of Film Bagged Apples in Michigan Retail Outlets--1960-61 Marketing Season, Lansing, July 1961.

A Study of Quality Variation and The Effect of Quality Incentive Payment Plan on the Economic Returns of Sweet Cherry Producers, Lansing, May 1961.

MINNESOTA

Minnesota's Chicken Industry, Minnesota Crop and Livestock Reporting Service, St. Paul, June 1961.

NEW JERSEY

New Jersey Agricultural Statistics, New Jersey Crop Reporting Service, Trenton, June 1961.

NEW YORK

Statistics from the U. S. Census of Agriculture in New York State by Counties, New York Crop and Livestock Reporting Service, Albany, October 1961.

NORTH CAROLINA

North Carolina Tobacco Report-1960-1961, North Carolina Crop and Livestock Reporting Service, Raleigh, March 1961.

North Carolina Agricultural Statistics, Soybeans, 1925-1960, North Carolina Crop and Livestock Reporting Service, Raleigh, July 1961.

North Carolina Agricultural Statistics, Peanuts, 1925-1959, North Carolina Crop and Livestock Reporting Service, Raleigh, January 1961.

SOUTH CAROLINA

The Vegetable Marketing Situation in Hampton County, South Carolina, South Carolina State Marketing Commission in cooperation with South Carolina Agricultural Experiment Station, Columbia, February 1961.

South Carolina Pecan Survey-1960, South Carolina Crop Reporting Service, Clemson, June 1961.

Opportunities and Trends in the Sweetpotato Processing Industry, South Carolina State Marketing Commission in cooperation with South Carolina Agricultural Experiment Station, Columbia, March 1961.

Peach Tree Survey by Designated Counties, 1961, South Carolina Crop Reporting Service, Clemson, June 1961.

South Carolina-Cash Receipts from Farm Marketing, South Carolina Crop Reporting Service, Clemson, October 1960.

South Carolina Livestock and Poultry Statistics Trends-1870-1961, South Carolina Crop and Livestock Reporting Service, Clemson, November 1961.

South Carolina--Crop Statistics--1955-1960, South Carolina Crop Reporting Service, Clemson, October 1961.

South Carolina--Soybean Statistics Trends 1945-1961, South Carolina Crop Reporting Service, Clemson, August 1961.

SOUTH DAKOTA

Agricultural Prices in South Dakota, South Dakota Crop and Livestock Reporting Service, Sioux Falls, March 1961.

South Dakota Agriculture--1960, South Dakota Crop and Livestock Reporting Service, Sioux Falls, May 1961.

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Where Do Virginia Apples Go?, Virginia Department of Agriculture and Immigration, Richmond, March 1961.

Follow-up Area Grain Marketing Study, Virginia Department of Agriculture and Immigration, Richmond, April 1961.

Area Hay Marketing Survey, Virginia Department of Agriculture, Richmond, November 1960.

Looking Into the Manufacturing Grade Dairy Industry in Virginia Virginia Department of Agriculture and Immigration in cooperation with Virginia Polytechnic Institute, Agricultural Extension Service, Richmond, June 1961.

Economic Considerations in Marketing Sweetpotatoes from the Eastern Shore of Virginia, Virginia Department of Agriculture and Immigration in cooperation with Federal Crop Reporting Service, U.S.D.A., August 1961.

WASHINGTON

Buyers of Washington Farm Products, Washington State Department of Agriculture, Olympia, June 1961.

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Marketing Wisconsin Feeds, Wisconsin Crop Reporting Service, Madison, October 1960.

Wisconsin Livestock and Poultry-1960, Wisconsin Crop Reporting Service, Madison, May 1960.

Wisconsin Commercial Apples--Supplies and Marketings, Wisconsin Department of Agriculture, Madison, July 1961.

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